

A STUDY OF WORKING CAPITAL MANAGEMENT IN IFFCO, WITH SPECIAL REFERENCE TO PHULPUR UNIT

THESIS
Submitted for the Degree of
DOCTOR OF PHILOSOPHY
IN COMMERCE

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**DEDICATED
TO MY
BELOVED PARENTS**

PREFACE

Soon after attaining the freedom, the Government of India, through its Five Year Plans, launched a programme for transforming agriculture from way of life to a commercial proportion and making the country selfsufficient in food and fibre. Fertilizer is the king-pin of Indian agriculture. It was, therefore, essentially popularised amongst the farming community to make the best use of chemical fertilizer. For this, the cooperative network was considered most appropriate, since it touched million of farmers all over the country by instilling in them sense of self-reliance, self-support and confidence.

In a developing country like India, where Agriculture is the foremost contributor to national wealth, agricultural development has a multi-faceted impact on the national life.

The Indian farmers generally grow all types of crops which are essential for their living. The agricultural production depend upon soil fertility, irrigation facility,

quality of seeds, use of chemical fertilizer and application of new techniques of farming. The effect of fertilizer on the yield is about 40 per cent while the remaining 60 per cent of the production is affected by the type of seeds, nature of soil, availability of water and methods of farming etc. Thus, fertilizer plays a dominant role in agricultural output.

Presently, for the supply of fertilizer, IFFCO is the only fertilizer cooperative society in India. It produces 18 percent of nitrogenous and 26 per cent of phosphatic fertilizer of our total indigenous production. Besides this, IFFCO, is playing a comprehensive role in distributing fertilizers, implements, pesticides and high yielding varieties of seeds to them, as well as educating the Indian farmers.

The problems of working capital cannot be generalised for all the business concerns by one norm, and, thus, it is necessary to deal with the situation of an individual business concern on the basis of the principles laid down by the authorities. The importance of working capital in any industrial concern need

not be over-emphasized. The existence of adequate supply, carefully administered, can make substantial difference between the success and failure of a business concern.

An attempt has been made here to present a detailed appreciation of several aspects of IFFCO specially its working capital management, present programmes and future plans in the light of national objectives.

To achieve the objects of this study, the data were collected from newspapers, journals, magazines, various annual reports of IFFCO, books, radio broadcast, spot studies, individual interviews with concerned authorities, officials and farmers, seminars and group discussions and periodicals issued by specialised agencies.

In the present study due attention has been paid to analysis of the management of working capital of Phulpur Unit of IFFCO. In management of working capital, the growth and performance of IFFCO, various concepts of working capital Management, Cash and Inventory Management and Accounts Receivables management.

IFFCO's four modern fertilizer plants at Kalol, Kandla in Gujrat and Phulpur and Anola in Uttar Pradesh, have total annual production capacity of 26 percent tonnes of fertilizer.

IFFCO Phulpur unit, is a modern fertilizer plant having a 900 TPD Ammonia Plants and 1500 TPD urea plant, the establishment of Phulpur Unit is a cost of Rs. 213.00 crores located 34 kms. from Allahabad. It started commercial production in March 1981, Phulpur units of IFFCO achieved 80 percent capacity utilisation in first year of its production, such high rate of capacity utilisation is very rare.

Production at Phulpur unit has been increasing every year its operations have been quite successful. In 1994-95 Phulpur units surpassed all previous records of production and produced 3.61 lakhs tonnes of Ammonia and 6.58 lakhs tonnes of Urea. However, later its perform has been lowest.

An attempt has been made to study various concepts of working capital in the

tried to study and analyse the working capital and its management in Phulpur unit. In chapter 5, cash management has been studied and attempt had been made to analyse the position of cash management of IFFCO Phulpur Unit. Inventory management is an important aspect of working capital management of any unit, hence, study has been made with regard to inventory management of Phulpur Unit. In chapter 7, analyses have been made regarding Account Receivable.

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In the end, let me bow my head in all humility to the my father Late Sri Jagdish Prasad Upadhyay and my mother, Smt. Parwati Devi, without whose all pervading mercy, it would have been impossible for me to complete this work in the face of seemingly never ending succession of difficulties.

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ALLAHABAD


(GHANSHYAM UPADHYAY)

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CHAPTER - I

INTRODUCTION

CHAPTER - 1

INTRODUCTION

India is predominantly an agricultural country and livelihood of majority of its population depends upon it. In spite of rapid industrialisation in the country, our economy is still dependent upon the agriculture significantly. Even today, if the monsoon and agricultural production fails, the growth of economy is also subdued. For the development of agriculture, several essential inputs are required and fertilizer is one of the basic inputs. In fact, today use of fertilizer being ~~King-~~pin is widely regarded as an Index of adoption of modern technology in agriculture.

As we started planned development of the economy through five year plans, several fertilizer plants were established in public as well as private sector. For the purpose, Fertilizer Corporation of India was established in 1961 in the public sector. However, there has been shortfall in the production of foodgrain and its demand has been increasing year by year. In mid sixties, we had to import large quantity of foodgrain due to shortfall in production and we started planning to develop high yielding varieties in the country. It was realised at that time that water and fertilizer play a very significant role in increasing production

in case of high yielding varieties. It was also then mooted to establish fertilizer plants in cooperative sector.

Indian Farmers Fertilizer Cooperative Ltd. (IFFCO) is the multiunit largest fertilizer manufacturing cooperative in Asia. It came into being on November 3, 1967. It was registered by the Central Registrar under the Multi Unit Co-operative Act, 1942. At about the same time, Government of India, issued a Letter of Intent to IFFCO for setting up a fertilizer plant at Kandla, with an authorised capital of Rs.200 crores. IFFCO is the Federation of over 30,000 Societies, most of them being village co-operatives spread over the sixteen states and three union territories. Farmer owners, represented through their villages or co-operatives, are the IFFCO's customers.

Starting with a seed capital of Rs.25 Lakh IFFCO presently owns four giant fertiliser units built at the cost of over Rs. 1,036 crores Kalol and Kandla in Gujarat and Phulpur & Aonla in U.P. Its share capital amounted to Rs.360.55 crores in 1981-82 which increased to Rs.362.53 crores on 31st March, 1997. It celebrated its Silver Jubilee in 1991. With the sound foundation laid in its formative years, it has grown to be a giant co-operative

planning a vital role in the production and marketing of fertiliser, development of agriculture, strengthening of co-operative structure and service to farmers.

IFFCO has earned a place of pride in production of fertiliser in the country. It has achieved the highest ever production of 27.93 lakh tonnes. The capacity utilisation in the plant has been 109.5% for Nitrogen and 113% for phosphatic fertiliser. It has contributed 13% of Nitrogen and 12.7 % of phosphatic fertiliser to the country's total production.

Membership of IFFCO, which was only 57 in 1968 has been 33260 on 31st March 1997. Which has declined as compared to 30512 in 1991. This decline has taken place due to amalgamation of some of the societies.

Although, IFFCO came in existence in November, 1967, the idea of its establishment was mooted in early sixties. After due deliberation at all levels of co-operative systems the National Co-operative Development Corporation (promoting agency

for co-operative marketing, processing, supplies and storage) concluded that for regular and uninterrupted supply of fertiliser to the co-operative distribution system, the co-operative must own fertiliser manufacturing facilities.

At this stage, pursuance of the Government of India's liberalised policy domestic and foreign investment in fertiliser industry was being encouraged. It came to the notice of Govt. of India that American Co-operatives owned and operated 30% of USA's fertiliser manufacturing capacity and marketed more than 30% of total fertiliser consumption in USA. It was also revealed that most successful modern fertiliser plants were owned by co-operative. The idea of having fertiliser plants in the co-operative sector started germinating and The National Cooperative Development Corporation started approaching the various facts of the problem in a systematic manner so that positive results could be achieved in shortest time. Indian co-operative system had the limitation of having experience of sugar and textile industries requiring an outlay of not more than two or three crores of rupees. On the other hand, a modern fertiliser plant required a capital investment of rupees 75 to 100 crores.

Co-operative leader believed and rightly so that small fertiliser plants, catering to the needs of farmers in a small area (like co-operative sugar mills) should be established to meet their consumption requirement without involving transportation and travel over long distances. Fertiliser technologist, however, recommended 600 tpd. capacity as an optimal size. The National Cooperative Development Corporation took up the matter of finding the feasibility of having small fertiliser plants and corresponded with International Co-operative Development Association (ICDA) of USA and some other organisations in USA, UK and Italy. It was reported that there had been some smaller plants with capacity of 75 tpd at gas wells, all of which had become obsolete as the larger plants had the advantage of economy of scale.

It was decided to take the assistance and guidance of American Co-operatives who had rich experience in this field. The USAID founded a feasibility study team which conducted the study in August, 1966 and recommended that a co-operative fertiliser manufacturing facility in India was feasible and that it needed further investigation

relating to various technical and locational aspects. Fortunately, American Co-operatives expressed positive interest and high level delegation of American Fertiliser Co-operatives visited New Delhi in April, 1967. This delegation had discussion with the various Ministries of Government of India, USA ID and Indian co-operative leaders through (NCDC). As a result of the high level meetings, both Government of India and USA ID started moving in the direction that practical shape could be given to the setting of a fertiliser plant in the co-operative sector with the assistance of American Fertiliser Co-operatives.

IFFCO was born as a logical corollary to the dominant share of co-operatives in the fertiliser marketing and the need of farmers for an assured and dependable source of supply of the most essential ingredient. Its birth was certainly inspired by the success of American Co-operatives developed an organisation titled "Co-Operatives Fertiliser International", a non-profit organisation to assist IFFCO in the setting up of fertiliser plant in the co-operative sector. IFFCO is, thus, the result of co-operative between co-operative movements in two countries- a developed and advanced nation such as USA and a developing country like India.

It is a unique example of one co-operative system helping another, without any pecuniary or profit motive, IFFCO was conceived as an all-India Society to fulfill the aspirations of million of farmers, while following basic commercial and management techniques within the framework of Multi Unit Co-operative Societies Act. Its constitution had to be framed keeping in view the special requirement of involving primary and secondary societies for raising co-operative part of the equity, IFFCO, thus, has a unique constitution allowing diversified membership ranging from village society to state national level federations running into more than 39,000 societies.

It was in September, 1967 that the Cabinet approved the proposal for issue of a Letter of Intent to the Co-operative Fertiliser Project and the participation of the Govt. of India in the rupee financing subject to satisfactory arrangements made with the USA ID for the foreign exchange components. As per the accepted pattern of government participation in the share capital of co-operatives, it was decided that the Government would subscribe Rs.18 crores against the co-operative share of Rs.9 crores.

Balance requirement of funds was to be met through loan by met through loan by Government of India (approx. Rs.24 crores) and by a consortium of lending institutions namely, Industrial Development Bank of India, Industrial Finance Corporation of India, Life Insurance Corporation of India, and Unit Trust of India (approx Rs.26 crores).

The American Co-operatives, namely, Co-operative Fertiliser International (CFI) agreed to provide one million dollars besides technical know-how to the project.

The problem started when it was learnt in November- December, 1967 that USAID would not be able to find the necessary funds for this project in view of the cuts imposed in AID appropriations. Therefore, a fresh source of mobilising finance for the project through funds from the US banks under the gurantee of USAID was explored with the bank of America as the lead bank. Simultaneously, a study of the market for the fertilisers to be produced by IFFCO was undertaken by a study team constituted by USAID (India) to check if the project mented the gurantee to be extended by that Organisation. The definitive engineering study by Chemical Construction Corporation completed

in September, 1968 established the economic feasibility of the project and estimated the total investment cost of the plant at \$ 97 million. The marketing study commissioned by USAID also concluded in September, 1968 that IFFCO and its member co-operatives will be able to transport, store and sell all the fertilisers planned to be produced by IFFCO as the co-operative structure was already selling five times the potential production by weight and twice the production by value.

When everything was ripe another stumbling block turned out on its way to development. Originally, the bank of America was to charge an interest rate of 6 1/4% to 7% on the entire loan in addition to various financing and guarantee charges. This rate was favourably viewed by the Ministry of finance. But at the time of finalisation of the loan agreement, the Bank of America indicated interest rate had gone up to 8 1/4 to 8 1/2% on the specific risk guarantee. This meant overall rate of interest nearly 9 1/4% , if the financing charges were also taken into account. While these rates were under consideration, the prime rate of lending in the United States went into 8 1/2% from the middle of June, 1969 which raised the

overall rate of nearly 10.5% The inability of the project was adversely affected by this development. Again IFFCO had to explore alternative source of financing, the project was realing under a grave crisis. The project was so precariously placed that it became doubtful whether it will materialise at all. But finally with spontaneous support extended by the Government of India, USAID were persuaded to meet part of the foreign exchange requirement from their funds and part of the foreign exchange were tied up through Government to Government loan from UK to Dutch. The final picture of financing the project emerged as under:

Share Capital	Rs. in Crores
Co-operative	9.00
Govt. of India	18.00
LOAN	
(A) Foreign Exchange Dollar (USAID)	15.45
(B) Allocation from Govt. to Govt. Credit	
(a) UK f-7 Million	11.92
(b) Dutch DFL 3070500 Rupee Loan:	
1- Govt. of India	11.23
2- ISDBI	11.00
3- LIC	10.00
4- IFCI	3.00
5- UTI	2.00
TOTAL	91.00

The Government of India provided unconditional guarantee to USAID, like Government of India would hold a mortgage on all assets of IFFCO. It was also contemplated that Government equity will be redeemed over a number of years after start-up of the plants. After consulting the cooperative leadership in various states, the state apex federations decided to have shareholding of Rs.2.5 crore in Punjab and U.P. each; Re. 1 crore in Gujarat and Re.0.75 lakhs in Haryana and other six states viz Rajasthan, M.P., Maharashtra, Tamil Nadu, Mysore (Karnataka) and Andhra Pradesh Rs.50.00 Lakhs each.

The 'Shri Ganesh' or beginning was made by the Govt. of India, Department of Co-operation, who released their first installment of Rs.25 lakhs in August, 1968. It was also contemplated that the state contributing Rs.50.00 lakh or more will have a seat on the Board of Directors of IFFCO. As a founding principle, it was also decided that the products of IFFCO will be shared among the participating states in proportion to their total shareholding by the cooperatives from states. The ten participating State Cooperatives Federations will get their share in this manner.

The farmers of IFFCO constitution and its by-laws deserve all praise for visualising and foreseeing some of the basic requirements of large scale industry at that stage and made adequate provisions for diversifications of the membership from village to national level without which it would not have been possible to get the share of equity subscribed within the stipulated time. The membership was open to agricultural credit societies, marketing societies processing societies and their federations at District, State and National level. The authorised share capital of IFFCO was kept at Rs. 100 crores which has since been enhanced to Rs.1000 crores.

Three types of shares were denomination for different tiers of cooperative societies, viz. Rs. one lakh for state federations, Rs.10,000 for district level primary societies and Rs. 1000 for village level societies. The societies could become member of IFFCO, by paying 25% of the share value along with admission fee, the balance to be paid in three instalments. This was done with the intention of facilitating the participation of even the smallest village society with limited resources and also to mobilise the resources from largest number of cooperative societies.

The foreign exchange leaders, viz., USAID had insisted on full subscription of cooperative equity before the signing of loan agreement. Similarly, Government of India equity of Rs.18 crores was to be paid in full before drawal of the USAID Loan. It was in this backdrop that share capital collection drive was started and it was decided to accomplish this task by June 30th, 1970. This was no easy job. It was enormous and challenging as it involved not only working with ten states but more than 25,000 societies mostly at the village level spread in these states. The services of some dynamic officer of Joint Registrar level from the State Registrar's Office were requisitioned so that they could extend their personal influence on the cooperative societies for purchases of IFFCO shares. Still there was no smooth sailing. Despite vigorous follow-up and frantic efforts at the grassroots level, adequate funds were not forthcoming. The field staff recruited for promotion and marketing of IFFCO products under seeding programme were given targets for collection of share capital as an additional job. Meanwhile, there appeared a two-column news item, 'Cooperative Fertilisers Projects 'In Doldrums' in Times of India. Economic Times of 30th June, 1969 carried an item 'Cooperative

Fertiliser Projects runs into Difficulties'. It further said, the Rs. 90 crore Indian Farmers Fertiliser Cooperative Project-- the biggest venture so far undertaken in the cooperative sector in the country has run into difficulties. Member Cooperatives from ten states were expected to contribute only Rs. 9 crores towards the share capital of the project to be set up in Gujarat. But actual contribution so far total about Rs.1.00 crore.

Discouraging prophesies were made by a few pessimist cooperators whether the India cooperative system with the kind of experience limited to sugar mills and rice mills and with a weak financial base will be able to muster adequate funds and technical expertise to implement this capital intensive sophisticated mega fertiliser complex.

The whole energy of the organisation was harnessed for collection of share capital. Field staff and officers were required to make more frequent calls canvassing and persuading village 'cooperatives for collection of meagre sum of Rs.250 as the first instalment of share capital. At this hour, the capability and credibility of Indian cooperatives were at stake.

Till the target date i.e., June 30, 1970 IFFCO could reach a figure of Rs. 2.88 crore (subscribed). However with the stepping up of this tempo, the subscribed figure reached Rs.8.06 crore by June 1971. But still we were short of our obligation the Govt. of India come to our rescue with a special centre scheme. Under this scheme, the Govt. of India provided Rs.67.85 lakhs to the National Cooperative Development Corporation for giving 15 years loan to State Govt. who is turn passed it on to state apex marketing federations as loan/ share capital. With this amount of Rs.67.85 lakhs, the apex federations subscribed a share capital of Rs.270 lakhs, making total figure of Rs.10.26 crores subscribed. Thus, the requirement of having the entire amount subscribed was honourably met.

But the problem was not yet over. The IDBI, the prime rupee lender had put a condition that IFFCO could not draw loan unless the subscribed amount by the cooperatives was fully paid up. Subsequent calls were issued were issued and field staff had to be on their toes to call 2nd, 3rd and 4th instalment of their share. By 1973, IFFCO had enrolled 24,000 members. Thus, so far, the

largest mobilisation of cooperative share capital in the country was accomplished in record time. This was the finest example of meticulous planning and execution, team effort, dedication commitment and sense of belonging to the organisation displayed by members of IFFCO family from every corner. Probably, it is that work culture which has taken IFFCO to heights in subsequent years.

OBJECTS OF IFFCO

IFFCO has been set up with some laudable objectives. These objectives are as follows:

1. Production of quality chemical fertiliser.
2. Making the fertiliser available nearest to the consuming points.
3. Strengthening cooperative system to withstand competition.
4. Education of farmers and cooperative personnel by popularising balanced fertilisation programme and improved agronomic practices.
5. The Objectives of IFFCO shall be to promote the economic interest of member by undertaking manufacturing of chemical fertilisers and allied products and their conversion, storage, transportation and marketing.
6. In furtherance of the above objectives IFFCO may undertake one or more of the following activities:

(A) To set up plant or plants for manufacture of chemical fertilisers and allied products/ bye-products.

(B) To acquire, establish, construct, provide and maintain and administer factories, township, estates, railway siding, building, yards, wells, water reservoir, channels, pumping installations, purification plants, pipe lines, carriage, storage sheds and accommodation of all description for facilitating the business of IFFCO.

(C) To manufacture, store, maintain, sell, buy, repair, alter, exchange, let on hire, export, import and deal in all kind of articles and things which may be required for the purpose any of the business of IFFCO or one commonly supplied or dealt in by persons engaged in any such business or which may seem capable of being profitable dealt in connection with any of the business of IFFCO.

(D) To subscribe to the shares of cooperative and other institutions.

(E) To enter into contracts for purchase and sale of raw material and finished products.

(F) To enter into collaboration with cooperative or other in India or in foreign countries for machinery and equipment and for designing, engineering construction, erection, operation and maintenance of fertilisers and chemical plants.

- (G) To establish branch officer and sales depots.
- (H) To carry an agency business of every kind and description connected with the business of IFFCO.
- (I) To undertake research and such other activities as are incidental and conducive to the development of industry as well as IFFCO;
- (J) To undertake such other activities as are conducive or incidental to the attainment of main objects of IFFCO.

MEMBERSHIP :

The membership of IFFCO has been open to the prescribed institution. It is limited to as follow;

1. National cooperative federation of Agriculture Credit/ Marketing/ Processing/ Supply and other Agriculture Cooperative Societies.
2. State level Cooperative Federation of Agriculture Credit/ Marketing/ Processing/ Supply and other Agriculture Cooperative Societies.
3. District, regional and primary cooperative credit/ marketing/ processing/ supply and other agriculture societies including cane unions.
4. Primary agriculture cooperative credit, service, multi-purpose, cane irrigation, farming societies and other village agriculture societies.
5. National Cooperative Development Corporation.

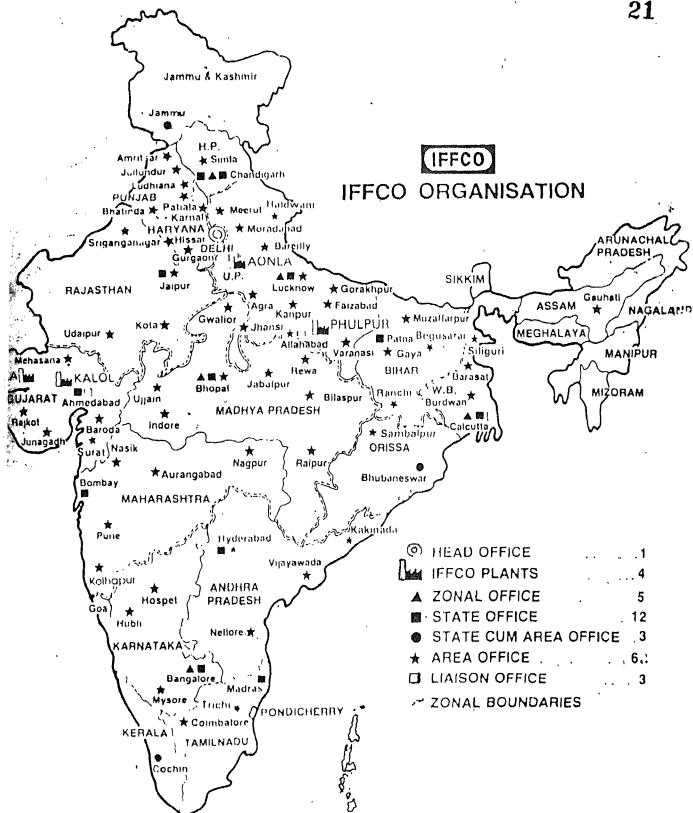
MEMBERSHIP AND SHARE CAPITAL

The membership of the society at the end of the year under review increased to 33,260 as against 29,821 in the previous year. The increase was mainly in the state of Rajasthan, Maharashtra and Uttar Pradesh.

The paid up share capital of the society has increased from Rs. 358.08 crores to Rs.362.53 crores during the period showing a net increase of Rs.4.45 crores. Out of it Rs.4.70 crores received from cooperative own fund and Rs. 3.93 crore by way of re-investment of quality rebate and dividend amount. A sum of Rs.80 Lakh was repatriated to cooperative Bank under the Banking Regulation Act.

GROWTH OF MEMBERSHIP AND SHARE CAPITAL

As on 31st March	Membership (Nos.)	Share Capital	
		Subscribed (Rs.)	Paidup (Rs.)
1981	28,164	84,16,58,000	83,82,51,177
1982	26,960	86,57,53,000	86,23,44,488
1983	25,408	87,94,16,000	87,44,27,057
1984	25,141	89,37,39,000	88,69,47,981
1985	25,926	98,26,33,000	97,04,35,855
1986	26,907	1,76,20,08,000	1,74,70,90,986
1987	28,134	1,88,56,81,000	1,86,75,47,261
1995	29,937	3,66,84,07,000	3,60,28,95,000
1996	30,426	3,65,59,35,000	3,57,29,62,000
1997	33,260	3,71,79,96,000	3,62,09,06,000



MAP-1.



MAP 2

Let us describe briefly, the establishment and development of four units of IFFCO i.e. (Kalol Unit and Kandla Unit (both in Gujrat) and Phulpur Unit and Aonla Unit (both in U.P.),

KALOL PLANTS :

The Rs. 75 crores Kalol Unit of IFFCO is located 26 Kms. from Ahmedabad on the Ahmedabad-Mehsana Highway. It started commercial production in April, 1975. In an area covering 96 hectares, the unit consists of plant producing Ammonia, Urea Malathin and Dry Ice along with necessary offsite facilities. The natural gas available in the vicinity of the manufacture of ammonia. Associated gas, Naphtha and LSHS are used as fuels. Water is supplied by GIDC from 11 borewells around the unit. Consumption of inputs for production of 910 tonnes of Ammonia and 1200 tonnes of Urea per day.

The Kalol site was closed to the gas collecting station and there are two or three oil wells within the periphery three oil wells within the periphery. Electricity is from the grid with power security provided by the GIDC. Water wells were sunk in periphery, so as to

make the plant uniquely self-contained in the matter of all inputs, except the oil and naphtha foods mentioned earlier.

The Ammonia Plant at Kalol was mechanically completed on March 15th 1974. After pre-commissioning, Ammonia was first produced on 5th November, 1974. The plant was dedicated by the Prime Minister on Nov. 8th, 1974. production was progressively increased to 750 tonnes per day put after filling up storage tank, the ammonia plant had to be shut down as the urea plant was not ready by that time. The Ammonia plant was restarted in march 1975, and the guarantee test was carried out. Production, was however, continued at low level just to meet the possible supplies to Kandla and FCI.

In May 1975 a shut down for two weeks taken to clean up the cooling surfaces. Which had fueled up in June 1975, the Air Compressor suffered damage following heavy rain and the plant had shut down again for about a week to carryout the necessary repairs.

The 'Test run' of the ammonia plant was taken over from the contractor. The urea plant

has been progressively taken to 100 percent capacity so far and is expected to stabilise after minor problems still being faced are corrected.

The Ammonia and Urea Plant operated at 94 and 95% of their licenced capacity respectively producing 2.83 lakh tonnes of Ammonia and 3.76 lakh tonnes of urea during the period April 89 to March, 90.

The Kalol plant achieved the highest ever production during the year 1991-92. The Ammonia and Urea Plants operated at 108 and 109% of their licensed capacities respectively and produced 3.24 lakh tonnes of Ammonia and 4.32 lakh tonnes of urea.

The Kalol unit produced 2.97 lakh tonnes of Ammonia and 4.21 lakh tonnes of urea during the year 1996-97 with a capacity utilisation of 99% and 106% respectively. This unit received ISO-9002 International certificate for quality assurance in production installation and services.

Kalol Expansion Project has been taken up to enhance the existing capacity of the

Ammonia plant from 910 MTPD to 1110) MTPD and that of urea plant from 1200 MTPD to 1650 MTPD at a revised estimated cost of Rs. 149.00 crores.

The project is in advanced stage of implementation and is expected to be commissioned in August, 1997 as per the schedule.

KANDLA PLANT :

IFFCO's NPK plant is located on the water front adjacent to Kandla Port Trust oil Jetty. The plant was built at a cost of about Rs.30 crores with streams (called train A and B) and having a licensed capacity of 1.27.000 tonnes of p.205. The plant was designed and installed by m/s Dorr Oliver Inc. to provide three grades of NPK. The plant was commissioned on 26th November 1975.

With increased demand for complex fertiliser the capacity of NPK plant has been doubled at a cost about Rs.28.6 crores. Two more streams (train C and D) have been added with the increased licenced capacity from 1,27,000 to 2,60,000 tonnes P205 per annum. Kandla phase 2nd was commissioned on 4th June, 1981 The water front location and the extended Jetty were used for receipt and storage of phosphatic acid. The

other raw material, Ammonia was to come from Kalol Plant and local storage was provided in Hortonspheres with refrigeration plant.

The early assumption of products for the Kandla plant followed the stereo typed pattern already established in the country namely DA and NPK, 17.17:17. The fact that precedent existed in shape of Madras Fertilisers made in the exist assumption to make. No account was taken of the water front location and consequent high humidity which would make the NPK, producted proposed difficult to make to store. Moreover, with the plant in two location, transport of urea would also be involved. Fresh thinking was called for and a most successful innovation was the result.

In the initial planning of the project, the understanding was that the loan element in the capital structure would come from government sources. Later the planning commission decided that loan funds should be availed from financing institutions. Approach was then made to IDBI, IFC, ICICI and other bodies ICICI did not consider that cooperatives fell in their region of investment outlets. A further retirement was

the arrival of the Government of India as a lender to the extent that the DDA loan is not to the project but is a grant to Government.

The Kandla Plant operated quite efficiently during 1991-92 producing 6.59 lakh tonnes of NPK and 3.46 lakh tonnes DAP and achieved 113% capacity utilisation. The Kandla unit also achieved the highest ever monthly production 33,901 tonnes of P_2O_5 during January, 1992. The unit also registered the highest monthly despatch of 1,25,718 tonnes in January 1992, surpassing the previous record of 1,51,161 tonnes in August, 1990.

The Kandla Plant operated at 99.6% of the installed capacity and produced 5.56 lakh tonnes of NPK and 3.19 lakh tonnes of DAP. It recorded the highest ever daily production of 1954 tonne of P_2O_5 in March 1993.

During the year 1996-97, the Kandla unit produced 9.29 lakh tonnes of DAP/NPK equivalent to P_2O_5 content of 3.50 lakh tonnes. The plant achieved a capacity utilisation level of 113% during this year. Another noteworthy feature

was the achievement of the highest monthly production of 44,358 tonnes of P_2O_5 in November 1996.

In January, 1997, the Government of India approved IFFCO's proposal for expanding the Kandla plant at an estimated cost of Rs.212.20 crore. The project, on completion, would increase the production capacity of the Kandla plant from the existing 3.03 lakh MTPA to 5.19 lakh of P_2O_5 . The project is under implementation and is expected to be commissioned by the end of the year 1999 as per schedule.

AONLA PLANT :

IFFCO has built a giant fertilizer plant based on Bombay high gas of Aonla, District Bareilly, Uttar Pradesh. Its Ammonia and urea plants were commissioned on 16th July 1988.

Right from the inception of plant, Aonla unit has achieved several milestones on schedule time; such as commissioning of 132 KV station, DM Plant and compressor House. As a result of sustained integrated efforts, it is a matter of great satisfaction and pride that Aonla Project was completed in a record time of 36 months and started commercial production in 42 months

and started commercial production in 42 months from the zero date (Jan. 1985). The Aonla unit project features as below :

Ammonia Plant	1350MTPD
Urea Plant	2200MTPD
Project Budget cost	Rs.696 crores
Project actual cost	Rs.665 crores
Zero Dale	08 January,1985
Commercial of Trial Production	18th May, 1988
Commencement of Commercial Production	16th July, 1988

Performance of this unit has since been excellent ever since it went in commercial production. Ammonia production during the first 8½ month was 2.97 lakh tonnes with a capacity utilisation of 94.1 percent urea production was 5.03 lakh tonnes with a capacity utilisation of 97.9 percent, which is highest achieved by any Indian Fertiliser Plant in its first year of commercial production.

The estimated cost of the project was originally Rs. 7300 crore which was revised to Rs.696 crore mainly on account of abolishing of customs duty on equipment imported for fertiliser industries. Inspite of very adverse effect in foreign exchange priority during the

construction period, a saving of more than Rs.30 crore has been accomplished by following very sound innovative methods in project implementation and commissioning.

Energy consumption in Ammonia Plant has been the best amongst new gas based fertiliser plant. The Ammonia and urea plants showed remarkable performance by operating at 106 and 114 percent of there licenced capacity respectively producing 4.33 lakh tonnes of Ammonia an 8.24 lakhs tonnes of urea during 1989-90, the plant completed. The first million tonnes of production on october 6th, 1989, in a record time of 496 days from, the start of commercial production. Anola project was awared second price for the vest project, Implementation by the ministry of the programme implementation, Government of India.

Anola extension has been approved in principle by Government of India, to double the capacity of urea plant at Anola.

It is expected that project will cost Rs.638 crores. The application for obtaining letter of inste nt has been submitted to Government

The Anola unit continued to maintain its excellent performance during 1991-92. The Ammonia and urea plants operated at 110 percent and 117 percent respectively on their installed capacity producing 4.89 lakhs tonnes of Ammonia and 8.50 lakhs tonnes of urea. The unit attained the highest ever monthly urea production of 82,737 tonnes during October 1991. During 1992-93, Ammonia & Urea plant operated 108.85 percent and 112.05 percent of their installed capacity respectively and produced 4.83 lakh tonnes of Ammonia and 8.17 tonnes of Urea.

The Ammonia and urea plants of Aonla - I Unit achieved a capacity utilisation level of 106% and 108% respectively by producing 4.70 lakh tonnes of Ammonia and 7.86 lakh tonnes of urea in the year 1996-97.

The Aonla Expansion unit (Aonla II) has commenced commercial production from December 25, 1996 ahead of schedule and within the approved project cost. This unit produced 1.17 lakh tonnes of Ammonia and 1.79 lakh tonnes of urea during 1996-97. The two Aonla units put together achieved the highest ever urea production level of 9.6 lakh tonnes of urea inspite of short

supply of natural gas. The Aonla Expansion Project ahead of schedule and within the approved project and commenced commercial production on December 25, 1996.

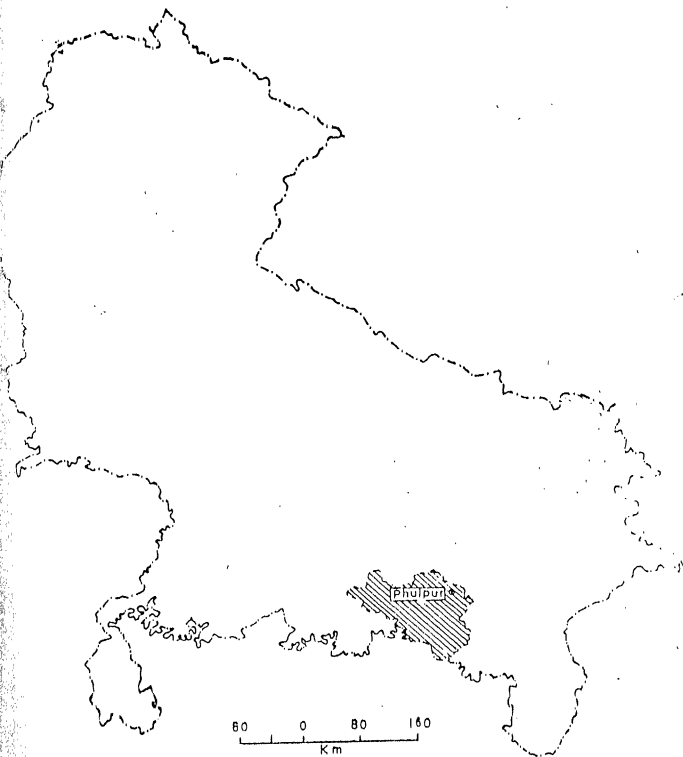
PHULPUR PLANT :

IFFCO Phulpur unit is a modern fertiliser complex having 9900 TPD Ammonia Plant and 1500 TPD urea plant. A steam and power plant is provided to meet the requirement of main process unit water treatment cooling Towers, Inert Gas generation, Instrument & Plant Air System, Neptha and Fuel Oil Handling system, Ammonia storage and Bagging, Coal Ash Handling, Effluent Treatment etc. are provided an auxiliary facilities of the complex. The Rs. 213 crore plant at Phulpur located 34 Kms from Allahabad , started production in March, 1981. Apart from that a Technical Division including well established R&D section always meets the technical services to complex.

Phulpur achieved 80 percent capacity utilisation in the first year of its production itself i.e. April 81 to March 82; such high rate of capacity utilisation in the first year operation is rare.

The Phulpur Ammonia / urea complex which

LOCATION OF PHULPUR UNIT.



MAP 3

achieved 80 percent capacity utilisation in the first year of its operation itself i.e. April, 1981 to March 1982. Such high rate of capacity utilisation in the first year of operation milestone in fertiliser industries. The unit has achieved a record production during 1994-95 by producing 658986 MT of urea with a capacity utilisation of 133.13%

Ammonia Plant in the year 1994-95 has produced 3,61,065MT of Ammonia at a capacity utilisation of 121.57% This capacity utilisation has been the highest so far with a lowest battery limit energy.

MAIN INPUT OF THE PLANT :

Phulpur fertiliser complex is Neptha based fertiliser unit. The feed stock Neptha and fuel oil are supplied by Indian Oil Corporation through Rail tankers. Coal supplies for the power plant is received from central coal field Ltd., and is transported through rail wagons. Raw water is pumped from Borewells located around the factory and township. Electricity and essential input to fertiliser manufacturing is mainly generated in our own power plant for reliability. However, a part of it is received through UPSEB grid. The

main inputs of the plant are as follows:

Naptha	850	MT/DAY
Fuel Oil	60	MT/DAY
Coal	1000	MT/DAY
Water	24000	MT/DAY
Electricity	1	MW

AMMONIA PLANT :

The plant is designed to produce 900 tonnes per day liquid ammonia based. On Kellogg process with Petroleum Naptha as raw material.

This is a single stream plant incorporating stem turbines driven, centrifugal. Compressors for major duties. The plant was commissioned in Oct. 1980. Desulphurisation of feed Naptha is carried out in Hydrotreater section. Here vaporised naptha is reacted with hydrogen from recycle synthesis gas. Further residual sulphur is removed in secondary reformer, air is added to furnish the nitrogen required for ammonia synthesis, Hot reformed gas from recondry reformer are cooled by heat recovery in the waste heat boilers producing H.P. steam. Shift converters convert carbon monoxide to carbon dioxide which is removed in the benfield system. Carbon dioxide is absorbed in promoted potassium carbonate

solution which is regenerated in stippers and recycled back to the Absorber. Carbondioxide is sent to urea Plant. Residual oxides of the carbon in the gas leaving the absorber are converted into methane in Methanator.

Synthesis make up gas from Methanator exist is compressed to about $150\text{Kg/cm}^2\text{g}$ by the Syn Gas compressor, Recycle gas leaving the synthesis. Converter Joins the last stage of compressor. Product ammonia is recovered by cooling the compressor discharge stream in a series of chillers where ammonia condenser. Gases are separated and sent to synthesis converter. The synthesis converter is a single piece reactor of about 3.5m. diameter, 28 m in length and weight and weighing 267 tonnes.

Liquid ammonia is purified by flashing at lower pressure and then sent to the urea plant or atmospheric Ammonia storage tanks, having capacity of 15000 tonnes. A purge gas recovery plant for the recovery of hydrogen from the purge gas has been erected within the Ammonia plant battery limit.

UREA PLANT :

Urea Plant of 1500 tonnes per day capacity is based on Snamprogetti self stripping process. Carbondioxide is compressed in a turbine driven centrifugal compressor to $154 \text{ Kg/Cm}^2 \text{ g}$ pressure. In the urea reactor operating a $154 \text{ Kg/Cm}^2 \text{ g}$ pressure and 190^0c temperature, ammonia alongwith recycle carbonate reacts with Co_2 to form Ammonia Carbonate, a part of which dehydrates to Urea. Reaction product flows to a steam heated stripped off as gaseous ammonia and Carbondioxide.

Purification of urea takes places in the medium and low pressure section operating at 1.7 to 3.5 Kg/Cm^2 pressure respectively.

After future decomposition of carbonate the solution leaving low pressure section of 72% of urea concentration is sent to evaporation section, vacuum concentrators are provided to concentrate the urea solution to 99.8% in two stages operating at 0.3 and 0.03 Kg/Cm^2 absolute pressures respectively. Urea melt from concentration section is pumped to the top of 92m. high natural draft prilling tower and sprayed by means of rotating prill bucket.

The fine droplets, while descending through the tower, come into contact with cold air, solidify and form prills. Product urea

from the bottom of prill tower is collected and sent to urea silo having a capacity of 30,000 MT or to bagging plant for final bagging.

UREA STORAGE AND BAGGING :

To facilitate the bulk storage of 30,000 tonnes of urea a precast R.C.C. structured urea site of 230 m length 40m width and 20m high has been provided. This ensure un-interrupted plant operation even when there is no-off take for the final product urea.

Urea is bagged to 50Kg. capacity bags in bagging plant. The plant has option to receive product urea either from urea plant or from site. The bagging plant is facilitated with eight bagging machines trains happens a automatic weighing and stitching urea bags by rail or road.

FEATURES OF THE PLANTA Page from Record BookTABLE - 1.2

Description	Ammonia		UREA	
	MT.	Period Date	MT	Period Date
RATED CAPACITY				
Daily	900		1500	
Yearly	297000		495000	
HIGHEST PRODUCTION				
Daily	1091	09.12.93	2140	23.11.94
Monthly	32920	Dec.93	62238	Dec.94
Yearly	346876	92-93	606975	92-93
HIGHEST CAPACITY	361065	94-95	658983	94-95
Utilisation	121.57%	94-95	133.13%	94-95
HIGHEST DESPATCH			5572	30.06.94
Daily			63793	Dec.94
Monthly				
Yearly			660014	94-95
PRODUCTION MILESTONE				
1 Million		31.07.85		13.11.83
2 Million		25.02.89		17.03.86
3 Million		22.04.92		08.06.88
4 Million				13.03.90
5 Million				25.12.91
6 Million				23.10.93

DESPATCH MILESTONE

1 Million	13.11.83
2 Million	17.03.86
3 Million	11.06.88
4 Million	19.03.90
5 Million	01.01.92
6 Million	25.10.93

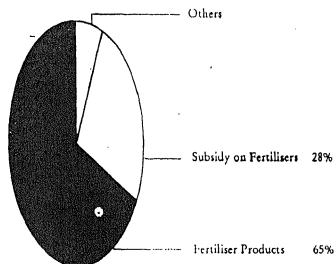
RECORD SAFE OPERATION

Longest Continuous Accident free	3.42 Million MAN HOURS
Man hours of operation	Achieved on 26.02.92

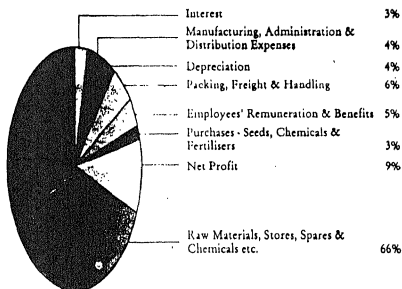
SOURCES & DISTRIBUTION OF INCOME

(Percentage Distribution) Rs. 2,27,650 Lakh

Sources of Income



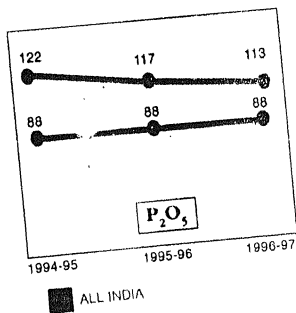
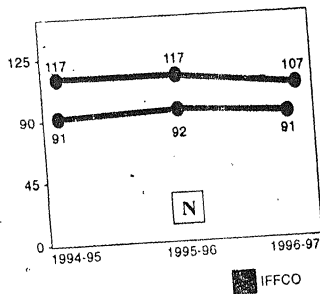
Distribution of Income



CAPACITY UTILISATION
(In Percentage)

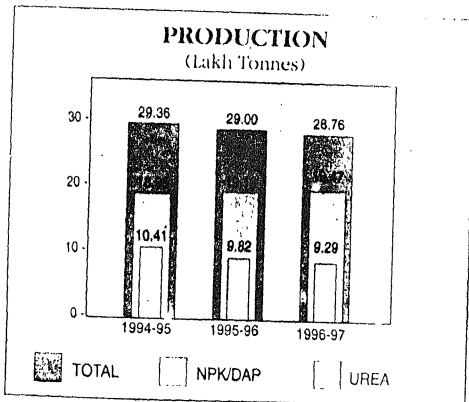
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FIGURE - 1.2



During the year 1996-97 IFFCO plants produced 28.76 lakh tonnes of fertiliser material achieving a capacity utilisation level of 107% and 113% in terms of nitrogenous and phosphatic nutrients respectively. Thus IFFCO contributed about 11.9% to the total 'N' production and 13.7% to the total ' P_2O_5 ' production in the country during this year. Hon'ble members will be happy to know that IFFCO's Urea plants achieved a record production level of 19.47 lakh tonnes during 1996-97.

FIGURE - 1.3



HIGHLIGHTS OF 1996-97 :

- Highest production of urea 19.47 lakh tonnes (Previous best 19.18 lakh tonnes in 1995-96)
- Highest sale of NPK/DAP 10.22 Lakh tonnes. (Previous best 10.04 Lakh tonnes in 1984-85).
- Kalol Plant achieved 8 million tonnes of urea production since inception.
- Phulpur plant achieved 8 million tonnes of urea production since inception.
- Aonla Expansion unit commenced commercial production of urea on December 25, 1996 within time and budgeted cost.

Awards

- (a) Best Cooperative Society Award from National Cooperative Union of India (NCUI)
- (b) Phulpur Unit received second Best Productivity Award for 1994-95 from National Productivity Council (NPC).
- (c) Second Best award for video film on "Promotion of Balanced Fertilisation" from Fertiliser Association of India (FAI).

IFFCO Phulpur unit is supplying urea generally to Eastern States of India. In the last few years, the demand of urea has gone up creating further gap between demand and supply.

Based on demand and supply scenario and performance of IFFCO Phulpur unit, it has been planned to expand capacity of existing unit. At present IFFCO Phulpur unit is a Fertiliser complex having 900 MTPD Ammonia Plant and 1500 MTPD urea plant. After expansion the production capacity will be more than the double of the existing one. Phulpur expansion project for setting up a 1350 MTPD Ammonia plant and two urea plants with 1100 MTPD each designed by Snam Progetti Italy. Total production capacity of both urea plant would be 2200 MTPD. The feed stock for the plant is Neptha.

The capital cost of the project has been estimated to be Rs.1190.00 crore with a debt equity ratio of 2:1 the technology for the plants would be repeat of the Aonla expansion project. This is a matter of pride for IFFCO Phulpur unit to install such a high production capacity plant at a low cost.

The expansion project got clearance from Public Investment Bureau, Govt. of India on February 23, 1995. The expansion project will incorporate all measures to meet the requirements of Pollution Control & Environment Protection.

The Ministry of Environment & Forest has also recognised the expansion project as pollution free and has granted its clearance on 23 March, 1995. Final clearance of the Project is obtained from, cabinet committee for Economic Affairs.

This approval was received in a very short span of less than 3 months, on 20 April, 1995 and has been declared as ZERO DATE for the Expansion Project. The Project being approved in such a short period is not only a glorious achievement but an outstanding record too. After the final approval, work of the Expansion Project has started and completed Dec., 97, before 3 months of the target.

All the latest available Technologies/ Equipments will be used in this Expansion Project towards Safety and Environment Control.

All measures of pollution control will be used to keep the factory premise and near by areas healthy and in a natural state.

VISION-2000 :

in conformity with the national policy of self sufficiency in food production through increased fertiliser use, IFFCO has developed a comprehensive plan called 'Vision'-2000' which inter alia envisages expansion of all its operating units, setting up of grassroot Urea production plants inside the country, and exploring the possibility of participation in Joint venture Nitrogenous and Phosphatic fertiliser project abroad and increasing the acreage under seed production. 'VISION-2000' aims at converting IFFCO into a **global fertiliser** giant by the end of this century.

In order to meet the challenges and retain its status of the largest producer, marketer of fertilisers in the country, a comprehensive long term plan entitled "VISION - 2000" has been drawn , among other things, includes expansion of the exisitng units, setting up of grassroot Urea production units outside of India, production of agrochemicals and increasing the acreage under seeds production etc. The main scheme envisaged to be implemented are as follows:-

1. A Memorandum of understanding has been signed between Government of India/ INDCONS (represented by IFFCO and KRIBHCO) and

- Government of Iran/ QFAA (Qeshm Free Area Authority) in order to set up a Joint venture fertiliser project for manufacturing 7.26 Lakh Tonnes urea annually.
2. Expansion of Aonla unit to double its production capacity is currently under implementation.
 3. In order to minimise energy consumption revamping of converter in Phulpur Unit.
 4. The society has planned to increase existing production capacity of Kalol, Kandla and Phulpur unit.
 4. To promote a new company under the name and style of "IFFCO AGRO - CHEM LTD." for manufacturer and distribution of technical grade pesticides.
 6. The society has undertaken the seed multiplication programme a view supplementing the availability of quality seeds of wheat, rice, maize, pigeonpea, pea, moongvean, pearl, nillet, sesamun, sunflower groundnut, mustard etc.

IFFCO has launched a pilot project for firm forestry and has constituted farm forestry cooperative societies at village level. As a part of its based efforts for overall development

of rural area and farm forestry and an extensive level, IFFCO has promoted a separate cooperative in the name of India Farm Forestry Development Cooperative Ltd. (IFFDC) which has also been registered.

OBJECTIVES OF THE STUDY :

Following are the main objectives of this study:

1. To study the role of IFFCO in Fertiliser Industry.
2. To study the role of working capital in Fertiliser Industry, IFFCO.
3. To assess the requirement of the working capital in IFFCO.
4. To study the various sources and arrangement of working capital in the unit concerned.
5. To study the various aspects of inventory, receivables, and cost management in the unit concerned.
6. To study the effect of working capital on profitability (cash flow analysis in short range and long range.)
7. To find out the adequacy of working capital in fertilizer industry investment per tonne of installed capacity.

Hypothesis :

We propose to test the following hypothesis of our study :

1. The working capital management of IFFCO Phulpur unit is satisfactory .it is also a successful and growing unit and is developing fertiliser plant in cooperative sector.
2. The arrangement of working capital is undertaken properly. The profitability of a business largely depends upon. "How the working capital is managed" 'proper management of working capital may result in greater efficiency. This has also to be tested in case of IFFCO Phulpur Unit.
377470
4815
3. The effect of working capital management of Phulpur unit of IFFCO is satisfactory but they can be further improved.
4. Inventory, cash and Receivable management of Phulpur unit is also satisfactory but they can be further improved.
5. For the present study it is also hypothesised that there is a heavy dependence of Fertiliser industry Phulpur commercial liability of concern.

RESEARCH METHODOLOGY :

We purpose to review the existing literature on the subject. the various related books, articles, and Journals were consulted for the purpose. Basically, the secondary data have been used. But to verify the data, so available have been taken interviews, with managerial persons and non-managerial persons of the unit. Several published material articles as well as reports are available to provide various essential information on the subject. They have been reviewed, analysed and thoroughly examined. Wherever necessary, proper certification have been undertaken as books and research work on the subject were not available. Hence, we have been depended much upon the data and information generated in the unit it self and also by ourselves through interviewing the managerial as well as non-managerial personnel.

All the data have been tabulated, computed and analysed with the help of recognised tools, techniques and methods. After compiling all the relevant material and after throughly analysis, the final draft have been prepared.

LIMITATIONS:

The basic problem is to define the exact nature of working capital. The gross working capital or the current working capital. It working capital is that total of current assets is presented by long term or short term liabilities. This is a quantitative approach here working capital were gross working capital.

If the working capital is in excess of assets over current liabilities it is qualitative approach and following three assumptions arose:-

1. If current assets exceed current liabilities, it reflects bearable condition of the industry.
2. If both are equal (current assets and current liabilities) it reflects company has make arrangement on fixed capital only by long term liabilities (shares, debentures) and working capital wholly depends upon short term capital. In this situation current ratio 1:1 means that company has no working fund and management has arranged current liabilities. This situation does not reflect the financial stability of

the company, i.e, the financial position of the company is unsound.

3. If the current ratio is below 1:1, is also show the dangerous position so with respect to this working capital were "Net Working Capital."

According to professional point of view the concept of gross working capital is better, but in this view, net working capital is better.

In IFFCO, the fixed capital and working capital both exist in such a way that the ratio of the working capital is less than 50 unlike the other industry which have more than 50. Although it is not applicable in all the conditions in practice. Generally it is expected that the ratio of the fixed capital should be greater. Various causes may be liable in this situation e.g., falacious inventory management, existence of the various old unit etc.

In our case study, the time factor of working capital consideration is limited upto the ten years. This time period will reflect the arrangement of the working capital i.e., how the IFFCO Phulpur has arranged its fixed capital,

working ? Either it is through long term means, e.g. share capital, reserve fund and surplus, debenture and bonds, long term or medium term loan and deposits, or the sources of working capital are short term, e.g., Trade creditors, Bank creditors, Bank credit and other short term revenues. All the data related to working capital were specifically limited to ten years.

All the questionnaires, observation, schedules, interview, annual reports, monthly reports, financial reports, financial statements and periodicals are with reference to the fertiliser industry but specially limited to the IFFCO Phulpur unit.

Our selection of the samples and methods of selecting of the samples is also related to IFFCO Phulpur unit only. We shall consider only the actual working capital position both net and Gross and that were limited to the period of last ten years, i.e., 1986-87 to 1996-97.

CHAPTER - II

GROWTH AND PERFORMANCE
OF
IFFCO

CHAPTER - 2

GROWTH AND PERFORMANCE OF IFFCO

Today, after 25 years of its relentless service to the cause of cooperative movement and also the economic well being of the forming community IFFCO stands with pride as an unique example of international cooperation and amply demonstrate that team spirit, dedication, sincerity, professional management well defined goals and mutual cooperation as its strength, it is all set to take up many more challenges in the times to come. The only hope, however, is a vigorous marketing policy aimed at extending the area of the fertiliser market to all the 6 lakh villages.

In other words, creating fertiliser awareness among the farmers as well as raising fertiliser production to the point where we could meet the needs of the entire agricultural population.

In the modern world, many economic activities are characterised by economics of scale which place a premium on large corporate entities, having access to vast resources of capital. In countries where means of production are privately owned and the initial distribution of income and wealth is highly skewed, the operation of the capitalist

economic system leads to a small property owning class appropriating for itself a disproportionate share of the country's national income. These inequalities can be at best only partially corrected through the redistributive fiscal policies, public ownership involving socialisation of profit can attack the problems of inequalities in income and wealth at their source. However, public enterprises give rise to difficult problems of efficient management which are not easily resolved, and without a satisfactory solution of these problems the impact on both growth and distributive justice may not be favourable. At the same time there are activities which can be undertaken efficiently on a decentralised basis both because economics of scale are of moderate importance in such activities and also because of responsiveness of the management to the felt needs of the local population constitutes a distinct advantage for their efficient operation.

These economic activities are ideally suitable for the co-operative mode of organisation which enables a large number of people with small means to pool their resources to secure the advantages of a large organisation, which is capable of being

managed and control democratically in the interests of the entire membership and therefore free both of exploitative lease of a large capitalist enterprise and of impersonal bureaucratic management which is after associated with large public enterprises. The co-operative form of organisation, based as it is on principles of mutual help, self reliance and democratic management and control. Can be a major instrument for the achievement of a nonexploitative and egalitarian pattern of growth and modernisation of the economy, particularly of our rural economy.¹

Cooperative Principles :

Co-operative principles can be traced to Rochdale Pioneers although its redimente in existence even in the times of Robert Owen. In the armals of Co-operative history, the business rules of the Rochdale Pioneers have guided the formation, development and extension of small Co-operatives throughout the world. It was on the recommendations of a special committee of the International co-operative Alliance (I.C.A.)

1. Keynote address by Dr. Manmohan Singh in Fifth National Convention on studies in co-operation; 1984, published proceedings, p.10

that a formal recognition was given to co-operative principles in 1937. The committee enumerated seven principles viz. open membership, democratic control, distribution of surplus in proportion of members transactions, limited interest on capital, political and religious Neutrality, cash Trading and promotion of Education. The committee graded the first four principles as obligatory/ essential and the rest as discretionary / non-essential.

In 1963, due to changes in the socio-economic conditions of the world, need was felt to review the principles. Accordingly, the I.C.A. appointed in October, 1964, a commission on co-operative principles under the chairmanship of D.G. Karve of India. The Commission in its report (1966) did not grade the principles as essential and non-essential. In fact, it laid greater emphasis on the first four principles, did not accept the three and added two new principles viz. promotion of co-operative Education , and co-operation among co-operatives. The principles as enunciated by the commission¹ are as under:

1. International co-operative Alliance, Report of I.C.A. Commission on co-operative principles. p.37

1. Membership of a co-operative society shall be voluntary and available without artificial restriction, or any social, political, racial or religious discrimination to all persons who need and can make use of the society's services and are willing to accept the responsibilities of membership.

2. Co-operative societies are democratic organisations. Their affairs should be administered by persons elected or appointed in a manner agreed upon by the members and accountable to them. The administration should be conducted on a democratic basis in a suitable form;?

3. Share capital should only receive a strictly limited rate of interest, if any.

4. The economic results, arising out of the operations of society belong to the members of that society and shall be distributed in such a manner as would avoid one member gaining at the expense of others. This may be done by a decision of the members in the following manner.

- (a) by provision for development of the business of the cooperative;
- (b) by provision of common services or
- (c) by distribution among the members in proportion to their transactions with the society.

5. All co-operative societies shall make provision for the education of their members, officers, employees and of the general public, in the principles and techniques of co-operation, both economic and democratic, and

6. All co-operative organisations, in order to best serve the interest of their committees shall actively co-operate in every practical, way with other co-operatives, at local, national and international levels, having as their aim the achievement of unity of action by co-operators throughout the world.

Emphasising the importance of these principles the Commission observed that "they are absolutely indispensable to the achievement of the co-operative movements" purpose. These are the idea inherent in co-operation and are the purposes of every co-operative activity.¹ An understanding of these principles can help us to identify co-operative organisations as distinct from other types of organisations. Commenting upon the validity of these principles, the late V.L. Mehta observed:

1. I bid, p. 37

"More than a century has elapsed since the principles were first enunciated; through the years, they have been examined and commented upon, refurbished and refurnished, but their original statement remains almost unaltered in all the essential aspects."¹ The Royal Commission on Agriculture (1926)² suggested various ways for the orderly growth of cooperative movement in the country and rightly remarked that, "if cooperation fails there will fail the best hope of rural India."

According to Hebert Calvert; "Co-operation is a form of organisation wherein person voluntarily associate together as human beings on a basis of equality, for the promotion of economic interests of themselves."³

According to C.R. Fay, another protagonist, "A Cooperative society is an association for the purpose of joint trading originating among the weak and conducted always in an unselfish spirit,

1. Mehta, V.L., Co-operation: An Inter disciplinary Approach, p.88

2. Royal Commission on Agriculture, 1928, Report.

3. Calvert, Hubert, the law and Principles of cooperation, p.19.

on such terms that all who are prepared to assume the duties of membership may share in its rewards in proportion to the degree in which they make use of their association".¹

Soon after the country attained freedom, the Government of India through its five years plans, launched a programme for transforming agriculture from the way of life to a commercial proposition with the objection improving specially the lot of the poor farmers and also making the country self-sufficient in food and fibre. Fertiliser is an important input for improving agriculture production. It was, therefore, essentially popularise the use chemical fertiliser among the farming community. For this, the use of cooperative touched millions of farmers all over the country by instilling in them. Sence of self reliance, self support and confidence.

The saying 'Like Faith', cooperative move mountains has come true in case of Indian Farmers Fertiliser cooperative Ltd. (IFFCO). It started as an experiment in a sophisticated and highly capital intensive industry and has blossomed to

1. Fay C.R., Studies in the social, Philosophy of co-operation, p. 44-45

occupy a place of pride in the history of national as well as international cooperative movement.

Indian Farmers Fertiliser Cooperative is the largest manufacturing cooperative in Asia. It came into being in November 3, 1967 as a modest venture with an authorised capital of Rs.200 crores. It has over the years, emerged as the singularly successful enterprise with its total investment standing at Rs.1150 crores. As a cooperative institution, it has grown as a biggest society in the whole of Asia and as an industrial enterprise it ranks number one in the fertilizer industry in the country.

IFFCO is Federation of over 33,260 of the society as on March 31, 1997, most of them being village cooperatives spread over 18 states and three union- territories. Farmer- owners represented through their village cooperative are IFFCO's customers. The share capital of the society stood at Rs. 362.09 crore on March 31, 1997 as against Rs. 357.30 crores on March 31, 1996.

IFFCO produces 16.17 lakh tonnes of urea and 10 lakhs tonnes of NPK fertiliser annually

and contributes about 12% of Nitrogenous Fertilisers and 25% of Phosphatic Fertiliser of the total National output, Starting with a seed capital of Rs.25 lakhs, IFFCO presently owns four gaint fertiliser units.

UNIT	PLACE	ANNUAL PRODUCTION
KALOL	NORTH GUJRAT	3.96 Lakhs tonnes Urea
KANDLA	NORTH GUJRAT	10.00 Lakhs tonnes NPK/DAP
PHULPUR	UTTAR PRADESH	4.95Lakhs tonnes Urea
AONLA	UTTAR PRADESH	7.26 Lakhs tonnes Urea

IFFCO has taken up the task of setting up a grassroot Ammonia - urea plant at Nellore in Andhra Pradesh involving sizeable investment. The internally generated funds need to be conserved to enable the society to raise funds required for financing these projects. To recommend payment of enhanced dividend at 13% compared to 11% paid last year to member societies whose name stood in the membership register of the society as on March 31, 1997.

INVESTMENT OUTSIDE IFFCO

IFFCO's investment in Krishak Bharti Cooperative Limited (KRIBHCO) stood at Rs.97.00

crore on March 31, 1997 which accounted for 21.07% of the paid up capital of KRIBHCO. KRIBHCO plant at Hazira has maintained a high order of performance by producing 15.04 lakh tonnes of Urea with a capacity utilization of 106% between April, 1996 and March, 1997, KRIBHCO is promoting a fertilizer project in Oman with RCF and Oman Oil Company. A dividend of Rs.10.67 crore has been received during the year.

The co-operative fertiliser giant IFFCO has agreed to rescue the crisis- ridden \$1.2 billion Oman India Fertiliser Project (OIFP) provided the existing partners met some conditionalities.

The IFFCO Board has given "in-principle" a clearance for the company to participate as the fourth partner in the joint venture between another the fertiliser cooperative KRIBHCO, public sector Rashtriya Chemicals and Fertilisers (RCF) and the Oman Oil Company (OOC), Fertiliser Ministry sources said.

The joint venture, formed two years back, envisaged an output of 14.52 lakh tonnes of urea from the plant at Oman with a 100 per cent buy back arrangement for the Indian firms. For equity

participation, the IFFCO has set conditions like freedom to import and sell urea independent of the buy-back arrangement and a reduction of the overall project cost by an estimated \$ 100 million.

While, the OOC would hold \$200 million of the total \$400 million equity, the rest would be equally shared among the three Indian partners once IFFCO formally joins them.

The IFFCO has, however, made it clear that it would formally participate in the project when suitable changes were made in the original agreement incorporating certain new clauses, sources in IFFCO said.

The project ran into rough weather following withdrawal of the French export credit agency Coface from the consortium that was providing loans and insurance cover. This led to some bankers putting fresh conditions including an equity increase to 33 per cent from the existing 25 per cent.

Recent reports had suggested that while the RCF was not in a good enough financial condition to raise its funding for the project, KRIBHCO had expressed reluctance to raise its share.

In this regard, the IFFCO said the total project cost should be reduced to reasonable levels after striking off unnecessary expenses as this would ensure its viability and also reduce the interest burden considerably, IFFCO sources said.

The financial expenses should be counted from the day when the IFFCO formally decides to enter into the project and it would not share the expenses made earlier on the project, sources said. The IFFCO also wants that the government should not act a canalising agency for the entire production and instead should allow them to sell anywhere in the Indian market for attaining maximum profitability.

It also said the Indo- Oman project should be treated as another business venture of the cooperative with minimum involvement of the government in planning and implementation stages.

Fertiliser Ministry sources ruled out the possibility of accepting fresh offers of the second bidder of the project, Krupp- Udhe Consortium of Germany, saying any such action would be against the business ethics and India's commitments.

Krupp- Udhe has offered a heavy reduction of about \$ 100million in the bidding price for the lump-sum turn key (LSTK) project and assured to convince a German government agency for providing insurance guarantee for the project.

But the Indian partners were not convinced with the seriousness of the offer as some feel that it might be a move to topple the whole project as the German agency could create problems at a later stage or they could put fresh conditions.

Another reason, which has prevented the Ministry from giving any consideration to the new offer, is the selection of Snamprogetti-Technic as the preferred bidder for the LSTK project after following established criteria and detailed analysis of the offer. "Krupp-Udhe should have given attractive offers at the time of bidding, now it is too late to consider their offer", ministry sources said. Though Krupp-Udhe said they would retain the debt-equity ratio to the original level of 3:1 while arranging insurance guarantee instead of 2:1 sought by the lending consortium, the promoters have agreed to increase the equity part.

The society has invested Rs.7.97 crore in Godavari Fertilisers and Chemicals Ltd. (GFCL).

Which accounted for 24.91% of the paid up capital of GFCL. . The company produced 3.85 Lakh tonnes of DAP/ 20:20:0 during 1996-97. GFCL has also announced mainden dividend of 10% for the year 1996-97 IFFCO has invested Rs.3.24 crore as equity in Indian Potash Limited (IPL) which accounts for 34% of the paid up capital of IPL. A dividend of Rs.12.96 Lakh has been received from the company for the year 1995-96. The society has made an investment of Rs.10.00 lakh in Maharastra State Cooperative Bank Limited (MSCBL). A dividend of Rs.1.5 lakh has been received for the year 1995-96. The society has also investment of Rs.1 lakh each in Indian Tourism Cooperative Limited (COOPTOUR) and National Films and Fine Arts Cooperative Ltd. (NAFFAC).

The society had entered into a Memorandum of Understanding (MOU) with the Government of Andhra Pradesh and Nandyal Cooperative Sugers Limited (NCSL); A.P. for providing managerial and financial assistance amounting to Rs.4.00 crore in the form of interest free loan with the approval of the Board of Directors of IFFCO and the Government of India. Due to non-availability of sugarcane in the area, NCSL could not operate the plant during the crushing season of the year

1996-97 , IFFCO has requested the A.P. Government to refund the financial assistance provided to NCSL and relieve IFFCO of its responsibility.

Indian consortium consisting of the Government of India, IFFCO and SPIC had entered into a long term agreement with Industries Chimiques Du Senegal (ICS) for supply of Phosphoric Acid by setting up a plant in Senegal IFFCO had contributed Rs.7.80 crore as equity equivalent to 6% of the paid up capital of ICS. The society's investment in ICS has resulted in assured supplies of Phosphoric Acid to a large extent. In 1996, the company produced 3.08 lakh tonnes of P_2O_5 and 1.79 lakh tonnes of complex fertilisers. The company supplied 2.25 lakh tonnes of P_2O_5 to IFFCO during the above period in the form of Phosphoric Acid Senegal had a separate mining company called Campaginie Senegalaise Des Phosphates De Taiba (CSPT) to mine phosphate rock for export and use in Phosphoric Acid plant of ICS. The CSPT has now been merged into ICS. This will enable ICS to have full control on its main raw material. ICS had declared a maiden dividend of about 3% for the year 1996.

IFFCO and ICS are actively pursuing a project to double the existing capacity of the Phosphoric Acid plant for meeting the demand of Kandla Expansion unit. This will also require exploitation of

new mines. The total estimated investment on these expansions is expected to be around US \$ 50 million in the form of equity and loan for the ICS Expansion Project.

Phulpur unit has been steadily improving its performance since the unit started its commercial production in March 1981. However, after the successful implementation of Primary Reformer Revamping in March, 1988, the plant productivity has increased beyond expectation in term of very high production and capacity utilisation, very high on stream efficiently, lower input consumptions and lower specific energy consumption.

In the plant performance report , an attempt has been made to systematically highlight and analyse the growth and steady improvement in productivity of Phulpur unit in all reports over the past 10 years.

Phulpur unit is forgoing ahead with new milestones and its performance has been appreciated and recognised on National level by confirming on the unit two prestigious awards. The first prize on Energy conservation was presented by Hon'ble President of India on 14 Dec.1991. , the

energy conservation day. The best productivity performance award from National Productivity council was received on 28th March, 92. It is received second best Productivity Award for 1994-95 and first Productivity Award for 1997-98 from National Productivity Council (NPC).

The Phulpur unit surpassed all previous and current records of production and produced 3.47 lakh tonne of Ammonia and 6.07 lakh tonne of urea. The urea plant made another record with the highest ever monthly production of 53936 tonnes in August, 92. The Ammonia and urea Plant operated at 116.7 and 122.6 per cent of their licenced capacity respectively. The Ammonia and urea plants at Phulpur achieved capacity utilisation levels of 104% and 113% respectively, by producing 3.10 lakh tonnes of Ammonia and 5.60 lakh tonnes of urea during the year 1996-97. The cumulative urea production from Phulpur unit since inception crossed 80.00 lakh tonnes level in February, 1997.

In the Ammonia Plant, the commercial production commenced in March, 1981 and it achieved 78.22 per cent capacity utilisation. In the beginning such high rate of achievement is rare. The production of IFFCO in its Ammonia Plant has been increasing over the year from 1985-86 to 1996-97 as it may be seen from the following table No. 2.1.

TABLE - 2.1

PRODUCTION OF AMMONIA PLANT

(In Metric Tonnes)

Year	Production Target	Actual Production	VARIANCE	Total Production of IFFCO	Percentage of Production Phulpur Unit
1985-86	255000	261492	+ 6492	1004000	26.05
1986-87	252000	278526	+ 26526	1030000	27.04
1987-88	230000	264102	+ 34102	577152	45.76
1988-89	260000	254172	- 5827	769537	33.03
1989-90	293000	319871	+ 26871	1076162	29.72
1990-91	295000	329982	+ 34982	1144000	28.84
1991-92	295000	295356	+ 356	1108151	26.65
1992-93	333500	346876	+ 13376	1091543	31.77
1993-94	335500	308843	- 26657	1115844	27.06
1994-95	338000	361065	+ 23065	1167921	31.02
1995-96	340500	333033	- 7467	1152823	28.12
1996-97	341000	310229	- 30771	1190540	26.82
1997-98	390000	415000	+ 25000	1680500	24.61

Source : Compiled from various Annual Reports of Relevant years of the IFFCO.

From the above table No. 2.1, it is quite clear that production in the Ammonia plant has increased from 261492MT in 1985-86 to 415000 MT in 1997-1998 or by about two times. However, in 1991-92, it declined to 295356MT. 23 days were lost due to plant turnaround and 24 days were lost due to crush shutdown.

If we analyse the production target with actual production, we find that there was negative variance in the year 1989-90, 1993-94, 1995-96, 1996-97. We can say on the basis of above table that total production has also been increasing from 1004000MT in 1985-86 to 1680500 in 1997-98. Highest total production has been 1680500MT in 1997-98. However, in 1991-92, it declined to 26.65% because breakdown and the target also increased. In 1992-93 the Phulpur unit achieved record of Ammonia production and produced 3.47 lakh tonnes. The Ammonia Plant operated at 116.7 per cent of capacity utilisation. The Ammonia plants at Phulpur achieved capacity utilisation levels of 104% during the year 1996-97.

Urea Plant of Phulpur Unit has achieved 90.91 per cent in 1985-86. Since then, its performance has steadily improved and in 1996-1997. The highest capacity utilisation of 113% could be achieved.

The production of IFFCO in its urea plant has been increasing over the year from 1985-1986 to 1996-97 as it may be seen from follow table 2.2

TABLE - 2.2

PRODUCTION OF UREA PLANT

(In Metric Tonnes)

Year	Production Target	Actual Production	Variance	Total Production of IFFCO	Percentage of Production Phulpur Unit.
1985-86	460000	449987	- 10013	777000	57.91
1986-87	445000	482071	+ 37071	904000	53.33
1987-88	396000	446933	+ 50933	919714	48.59
1988-89	445000	444815	- 185	1226285	36.27
1989-90	500000	546154	+ 46154	1745957	31.29
1990-91	500000	590004	+ 90004	1846866	31.95
1991-92	500000	506175	+ 6175	1787901	28.31
1992-93	569800	606975	+ 36875	1787901	33.94
1993-94	530000	540544	- 10544	1825539	29.54
1994-95	580000	658983	+ 78983	1894653	34.24
1995-96	550000	581459	+ 30459	1917994	31.33
1996-97	550000	560364	+ 10364	1947123	26.43

Source : Compiled from various Annual Reports of Relevant years of the IFFCO.

After the analysis of the table of 2.2 it is quite clear that production in Urea Plant has increased from 449987 MT in 1985-86 to 560364MT in 1996-97 and 108590MT in 1980-81. Thus it has increased by 5.32 times. However in 1991-92 , it declined to 506175MT due to breakdown, 23 days were lost due to planned turn around and 24 days were lost due to crash shutdown of urea Plant. If we analyse the production target with actual production, we find that these were positive variance from 1985-86 to 1992-93 and 1994-95 to 1996-97 again 1993-94 comes negative variance. However it became positive , it means that improvement in production.

If we analyse the total production and production contribution of Phulpur Unit, we see that total production increased from 777000MT in 1985-86 to 1947123MT in 1996-97. However, the total production declined in 1991-92, 178790MT. Total production increased due to start of Aonla Plant in 1987-88. Contribution of Phulpur Unit also increased in various year.

After 1987-88, percentage of production at Phulpur unit declined because the contribution of Aonla Plant production was also introduced. In 1992-93, Phulpur produced highest production of urea 6.07 lakh tonnes and urea plant operated at 122.6 percent capacity. Urea Plants at Phulpur achieved capacity utilisation levels of 113% respectively.

The capacity utilisation of Ammonia Plant has been increasing over the years from 1985-1986 to 1996-97 , as it is clear from the table 2.3 given below:

TABLE - 2.3CAPACITY UTILISATION OF AMMONIA PLANT

Years	Capacity Utilisation in percentage
85-86	88.04
86-87	93.78
87-88	88.92
88-89	114.11
89-90	108.43
90-91	111.36
91-92	99.45
92-93	116.7
93-94	115.23
94-95	117.00
95-96	112.00
96-97	113.11

Source : Complied from various Annual reports
 of Relevant years of the IFFCO

After analysing the above table. We find that capacity utilisation of Ammonia plant increased from 88.04% in 1985-86 to 116.7% in 1992-93 and 113% in 1996-97. However, in 1991-92, it declined to 99.45% because 23 days were lost due to planned turn around and 24 days were lost due to crush shutdown of Ammonia Plant. The capacity utilisation has been more than hundred percent from 1988-89 to 1996-97. It was almost hundred percent in 1991-92. 1993-94 surpassed all prior records.

The Phulpur Urea plant, which commenced commercial production in March, 1981 achieved 80 per cent, capacity utilisation in first year of its operation, such high rate of capacity utilisation in the first year of operation is rare. We can see it from the following table

No. 2.4

TABLE - 2.4CAPACITY UTILISATION OF UREA PLANT

Years	Capacity Utilisation in percentage
85-86	90.91
86-87	97.39
87-88	99.21
88-89	119.82
89-90	110.33
90-91	119.19
91-92	102.26
92-93	122.6
93-94	119.24
94-95	115.00
95-96	117.00
96-97	107.00

Source : Complied from various Annual Report
of Relevant years of the IFFCO.

On the basis of above table, we find that capacity utilisation of urea plant increased from 90.91% in 1985-86 to 107% in 1996-97.

During the year 1992-93, Phulpur unit has surpassed all its previous and present records, and excellent in every field. In 1991-92 percentage declined due to 23 days lost due to planned turn around and 24 days lost due to crash shutdown of urea plant. Thus we find that capacity utilisation has been more than hundred per cent from 87-88 to 1996-97. But the highest was in 1992-93 i.e. 122.6 per cent.

Award Won By IFFCO Phulpur Unit

Year 1985-86

1. National Safety Award- Special commendation certificate for Meritorious Performance in Industrial Safety during 1985 in achieving the longest Accident free period.

- from Ministry of Labour, Govt. of India.

Year 1986-87

1. 3rd Best Productivity Award during 1986-1987.

- from National Productivity Council,
New Delhi.

2. National Safety Award - Special Commendation Certificate for Meritorious Performance in

Industrial Safety during 1986 in achieving the longest accidents free period.

from Ministry of Labour, Govt. of India.

Year 1987-88

1. NPC Productivity Award for the Best Productivity performance during the year 1988-1989.

from National Productivity Council, New Delhi.

2. Certificate of Merit for Production performance in 1988-89 for the second best overall performance achieved in Nitrogen (Ammonia) Fertilisers.

from Fertiliser Association of India.
New Delhi.

3. Silver Jubilee Award for Best Technical Innovation for 1988-89 for modification in LP Steam system to save energy in urea plant.

from Fertiliser Associating of India.
New Delhi.

4. National Safety Award- Speical Commendation certificate for Meritorious Performance in Industrial Safety during 1988 in achieving the longest Accidents free period.

from Ministry of Labour, Govt. of India.

Year 1990-91

1. First Prize for Energy Conservation in Fertiliser sector.

- from Ministry of Energy , Deptt. Govt. of India Resented by Hon'ble President of India to IFFCO Phulpur , on 14th December 1991.

2. NPC Productivity Award for the second Best Productivity performance during the year 1990-91.

- from National productivity Council, New Delhi.

Year 1992-93

1. Special Commendation certificate for Energy conservation in Fertiliser sector.

from Deptt. of Power , Govt. of India.

2. National safety Award- Special Commendation certificate for Meritorious Performance in Industrial Safety During 1991 in achieving the longest Accident free period-

from Ministry of Labour , Govt. of India.

Year 1993-94

1. Best Technical Innovation Award for the work done on Diversion of off Gases from Carbonate separator to medium Pressure condenser in urea.

from Fertiliser Association of India New Delhi.

2. Best Environmental Protection Award from Fertiliser Association of India. New Delhi.

3. 2nd Jawaherlal Nehru Memorial National Award on Pollution Control from International Green Land Society, Hyderabad.

4. Environment and Pollution Control Award from Rotary Club of Allahabad (Mid town),

Year 1994-95

Best Overall performance of an operating fertiliser unit for nitrogen (ammonia plant).

from Fertiliser Association of India,
New Delhi.

Year 1996-97

1. Best Cooperative Society Award
from National Cooperative Union of India,
(NCUI).

2. Second Best Productivity Award for 1994-1995,

from National Productivity Council (NPC),

3. Second Best Award for Video Film on "Promotion of Balanced Fertilisation."

from Fertiliser Association of India, New Delhi.

Programme of Activities for 1998-99

The programme of activities for the year 1998-99 are as under.:

Estimated Production (Lakh tonnes):

Kalol & Kalol Expansion	5.46
Phulpur & Phulpur Expansion	12.76
Aonla & Aonla Expansion	15.46
Kandla (NPK/DAP)	10.00

TOTAL	43.68

Estimated Urea Imports (Lakh tonnes)	1.25
Estimated Sales (lakh tonnes)	
Urea	34.67
NPK/DAP	10.00

TOTAL	44.67

Implementation of major Projects :

(a) Kandla Phase II NPK/DAP Expansion Project	
Expected Expenditure (Rs.in crore)	100
(b) Nellore Ammonia-Urea Project	
Expected Expenditure (Rs.in crore)	4.30

Joint Ventures :

(a) ICS Expansion Project	
Expected contribution towards equity/Loan (Rs. in crore)	90
(b) Ammonia-urea project at Iran	
Expected contribution toward Equity (Rs. in crore)	60

Infrastructure Project :

Expected Expenditure (Rs. in crore)

i)	Kandla Jetty	1.32
ii)	Naphtha tank wagons	20.00
iii)	Diversification/Mordenisation	50.00
iv)	Renewals and Replacements	30.00
v)	Research and Development	2.00

FINANCIAL PERFORMANCE :

IFFCO started with a seed capital of Rs.25 Lakh. IFFCO emerged as the financially strongest cooperative institution, in the country with paid up share capital of Rs.362.09 crore of March 31, 1997 as against Rs.357.30 crore on March 31, 1996. IFFCO fixed assets rose from Rs.287.36 crores in 1986-87 to Rs. 1097.40 crores in 1996-1997. The net worth of the organisation which was at the level of Rs.611.84 crores in 1986-87 increase to Rs.1430.77 crore in 1996-97 crore in 1996-97. The profit of the plant which was at the level of Rs.101.8 crore in 196-87 increased to Rs. 166.41 crore in 1996-97

IFFCO, the premier agricultural cooperative and an industrial giant in the country, continued to participate in the process of making the country self - sufficient in food production by meeting

the increasing demand for fertilisers. Being a leading fertiliser producing and marketing organisation, the society is alive to the problems associated with the t e continued imbalance in the NPK use ratio. With a 'strong rural and cooperative base , the society continued to play a significant role in promoting the concept of efficient and balanced use of fertilisers. IFFCO also extended a special cash incentive to the farmers through grassroot level cooperative network for increasing the usage of Phosphatic and Potassic fertilisers to recoup the deteriorating soil health.

Due to the constraints in the availability of raw materials in India and the growing demand for urea, Phosphatic fertilisers and intermediates, the society is exploring the possibility of participation in overseas Joint venture projects in countries where raw materials and other inputs would be available at economical rates. To achieve this objective, an Ammonia/ Urea complex at "Qestum Island" in Iran is under active consideration. The price of Natural Gas has been frozen at US \$ 0.75 / million Btu. IFFCO and KRIBHCO will each contribute 30% towards the equity in

this project while Qeshm Free Area Authority (QFA) will contribute remaining 40% equity.

The construction of liquid Cargo Jetty for unloading liquid raw material, viz. Phosphoric Acid and Ammonia for kandla unit is in progress. An MOU has been signed between Kandla Port Trust and IFFCO in terms of which vessels carrying raw materials meant for IFFCO would get priority berthing and would not have to incur demurrages for want of berth.

Financial performance of any business concern may be judged with the help of various parameters, ratio analysis and other standard method of judging the performance. In this part an attempt has been made to assess the financial performance of IFFCO Phulpur Unit.

The company's performance may be judged with the help of its sales achievements. For a growing concern, the sales should increase year by year contributing more and more profits. We find that the sales of IFFCO have been increasing over the years. It is quite evident from the following table No. 2.5

TABLE - 2.5

SALES

(Rs. in Lakhs)

Year	Phulpur Unit	Total Sales	Percentage
1985-86	8591.50	39493.62	21.75
1986-87	8243.46	49294.62	16.72
1987-89	17159.00	94722.04	18.11
1989-90	11848.56	64983.68	18.23
1990-91	14098.00	71536.22	19.71
1991-92	15548.30	87725.29	17.72
1992-93	15459.40	101374.95	15.25
1993-94	13915.60	118646.10	15.12
1994-95	197745.50	141960.40	16.71
1995-96	18307.30	150540.10	14.21
1996-97	18170.60	151300.00	14.11
1996-97 (budgeted)	21182.20	-	-

Source : Compiled from various Annual Report of IFFCO.

From the above table no. 2.5 , it is quite clear that sales have been increasing. If we analyse the sales of Phulpur unit. We can find that sales of Phulpur unit, have been increasing from 1985-86 to 1995-96 except in the year 1989-1990. Highest sales of Phulpur unit is in 1994-1995. Phulpur unit received second best Productivity Award for 1994-95 from National Productivity Council (NPC).

Total sales and per cent also increased. unit from year in 1985-86 to 1995-96. The highest total sales of Phulpur unit were in 1995-96.

The decline in percentage in 1986-87 was because the Govt. of India instructed all the manufacturersto withdraw all the additional discounts on sales of any fertilizer material in direct or indirect form. So IFFCO suffered a loss of sales.

After 1986-87, increase in percentage and in 1991-1992 became down due to increase in fertiliser prices by Govt. of India.

It would be quite worthwhile to make a comparative study of sales of various units of

IFFCO i.e. Kalol, Kandla. Phulpur and Aonla Sales Value of various units have been calculated on the basis of following three factors:

1. Sales are accounted for on the basis of issue of release orders.
2. Sales on consignment basis are accounted for accordance with return received from respective consignees.
3. Sales are net of discount, rebates and return.

The sales of all the four units may be seen from the following table no. 2.6.

TABLE No. 2.6

COMPARATIVE STUDY OF SALES OF VARIOUS UNITS OF IFFCO

(Rs. in Lakhs)

Year	PHULPUR	KALOL	KANDLA	AONLA
1985-86	8591.50	6584.16	24317.96	-
1986-87	8243.46	7558.64	25869.18	-
1987-89	17159.05	16293.09	52900.80	4528.59
1989-90	1184.56	10444.40	18615.33	16279.01
1990-91	14098.00	9521.41	22758.93	20591.44
1991-92	15548.30	11074.66	33796.41	25261.90
1992-93	15459.40	10734.80	46874.20	23247.85
1993-94	13916.60	9510.30	46729.10	22710.20
1994-95	19745.50	14642.20	62449.30	25513.10
1995-96	18307.30	15882.50	70021.00	26760.40
1996-97	18170.60	14701.10	80158.20	30776.10

Source : Compiled from various Annual Reports of Relevant Years of IFFCO.

On the basis of above table no. 2.6 it is quite clear and sales value of urea has increased in 85-86 from Rs. 8591.50 Lakhs to Rs.18170.60 lakhs in 96-97. Thus it has increased almost by two times.

In except of 89-90 and 93-94 Phulpur unit sales value always increased. But other Plant like Kandla sales had gone high. Aonla Plant was established in 1987, but sales capacity from 87-89 to 96-97 has always increased ⁱⁿ comparison with Phulpur Unit.

Lower consumption levels coupled with increased indigenous production and heavy imports for the two consecutive years 1984-85 and 1985-86 resulted in the glut condition in the market.

In 1986-87 and 87-88, country faced drought condition in Gujarat, Rajasthan and other states also such as Punjab, Haryana , Uttar Pradesh, Andhra Pradesh and Karnataka, so the consumptions of fertiliser was low. In 1988-89 the weather was good and Govt. declared 7.5 per cent discount in Urea.

The year 1989-90 experienced good monsoon with wide dispersal over large area throughout the country. This was 4.9 percent higher than the

previous years consumption level. Phulpur sales value increased to 11848.56 lakhs. In spite of good monsoon, the urea market continued for a glut situation.

Phulpur unit had achieved record sales 19745.50 Lakhs in 1994-95 showing an absolute increase of 13916.60 Lakhs compared with 1993-94. The highest sale value ^{was} obtained by Kandla Unit. Aonla unit continued to maintain its excellent sales performance in 1990-91.

In 1991-92 the increase of fertiliser prices by 30 percent by the Govt. of India has also contributed to slowing down the growth rate of consumption of fertiliser.

Despite these adverse circumstances, the Phulpur Unit has achieved an all time record sales of Rs. 19745.60 Lakhs. Kalol, Kandla & Aonla unit sales also increased, but highest sales of Kandla unit because of high jump in sales of NPK/DAP.

TABLE NO. 2.7EMPLOYEES REMUNERATION TO TOTAL EXPENSES RATIO

Year	Employee Remuneration Phulpur Unit	Total Expenses Phulpur Unit	Ratio
85-86	498.62	13217.33	0.037
86-87	495.31	15856.61	0.031
87-89	991.47	26794.50	0.037
90-91	828.57	16414.36	0.050
91-92	882.41	17839.38	0.049
92-93	1023.44	20930.84	0.048
94-95	1318.73	23645.59	0.055

Source : Complied from various Annual Reports
of Relevant years of IFFCO.

Employees Remuneration to Total Expenses Ratio:

It is worthwhile to study employees remuneration to total expenses ratio, with the help of this ratio, we can analyse the ratio between remuneration and the total expenses.

It may be seen from the table No. 2.7

Employees remuneration at IFFCO , Phulpur unit have been varying from Rs. 498.55 lakhs in 1985-86 to 1318.73 lakhs in 1992-93 or by about more than four times. it has been because wages and salary revision have been undertaken twice during this period. As a percentage of employees remuneration to total expenses it has been varying from 2.6% in 1981-82 to 5.5% in 1991-92. However, all these ratios suggest unsatisfactory situation and needs proper constant over remuneration payable to employees. During 1989-90 and 1990-91, employees remuneration has been higher due to payment of arrears, on account of revision made earlier. Total expenses increased due to high jump in depreciation 2697.68 lakhs. In 1992-93 total expenses increased due to rate increase in Naphta, salary allowances and other welfare expenses.

Contribution to Subsidy from Government :
Under Retention price Scheme -

According to the Govt. of India has been controlling fertiliser prices since 1943 both at the factory and farm gate levels as well as at the port. The aim of the controlled fertiliser price has always been insulation of domestic prices from fluctuations in the world market, equalisation of the cost of domestic and imported fertilisers and maintenance of price informity all over the country. But there was no budgetary subsidy on fertilisers until the late seventies. During the second world war the Government had established a 'Central Fertiliser Pool' to regulate fertiliser distribution in the Country. The Pool used to procure the entire indigenous production of nitrogenous fertilisers for distribution on a fixed retention price.

The contribution to subsidy from the Government under the retention price scheme is accounted from the factory. Claims for increase/decrease in subsidy are accounted for when accepted and accounted by Fertiliser Industry Cooperative Committee.

The subsidy of each plant received, will depend on the Retention Price fixed by the

Government of India from time to time. The amount received from Government of India for different plants is shown in Table No. 2.8.

TABLE 2.8

SUBSIDY FROM GOVERNMENT

(Rs. in Lakhs)		
YEAR	TOTAL	PHULPUR
1986-87	10,190	6,530.39
1987-88	38,472	6,777.17
1988-89	34,698	13,520.15
1989-90	38,731	13,806.71
1990-91	43,070	10,444.49
1991-92	40,954	6,509.81
1992-93	42,126	8,827.70
1993-94	52,514	6,584.32
1995-96	41,468	4,011.10
1996-97	63,033	3,853.20
1997-98	Budgeted	2,138.28

Source : Compiled from various Annual Reports of
Relevant Years of IFFCO.

The negotiations with the World Bank for financing the Phulpur Project was successfully concluded during the year 1985-86. The world Bank approved the grant of 109 million US Dollar loan for the Project. The loan agreement was signed by our Ambassador to the United State. The Govt. of India is the guarantor of the loan which has been guaranteed under a separate guarantee Agreement entered into between Indian and the IBRD. The repayment principal during the quarter and amount of interest paid during the quarter ending as per agreement. The principal and interest amount were from time to time.

For the payment of balance amount , Phulpur unit took 60 million dollar from IBRD. The loan taken in foreign currency so what ever dollar rate in the market that will pay. Phulpur Unit paid world Bank loan by obtaining the equivalent Bridge loan from S.B.I. Further Banker Trust loan equivalent to 60 million dollars was taken from banker Trust Asia, Hong-Kong.

As per loan agreement with Bankers Trust Asia (H.K.) IFFCO has to pay interest fallo wing on 6 and 12 months from the date on which loan is made. The average exchange rate is weighted of the exchange rate at which outstanding currencies was disbursed. It is determined by dividing

the currency amount outstanding by US Dollar equivalent. The first instalment paid to Bankers Trust Asia (HK) Ltd. in the month of February 1993. The payment made US Dollar Six Million Two Hundred Sixty five Thousand Three Hundred Seventy Eight and paint Eighty only. In Indian currency paid Rs. 1934.70 lakhs principal plus interest. Next instalment paid after six months.

NON-FINANCIAL PERFORMANCE :

IFFCO has been operating as a cooperative society, therefore, it has been undertaking large number of activities for benefit of farmers , employees and society, as a whole. This is quite essential as this society has to serve them to their most satisfaction. We have already studied and analysed the financial performance of IFFCO with special reference to Phulpur unit. We have made an attempt to analyse the non- financial performance of this unit. For the sake of convenience, we have divided our study in the following viz.

- A. Developmental Activities
- B. Employees Welfare, and
- C. Social Activities.

Let us describe these briefly in the following pages.

A. DEVELOPMENT ACTIVITIES -

The main thrust of the society's activities continues to be the promotion of balanced fertilisation and transfer of modern agriculture technology to the farming community. To achieve the objective, the society conducted various extensions and promotional activities through its well qualified marketing staff. The number of various extension and promotional activities carried out, from time to time given below :!

PROGRAMS	NO.	REMARKS
<u>Field Demonstration</u>		
Through Plot	1525	Laid on major crops
Black sowing	565	Like rice, wheat, Pulses, oilseed etc.
Critical Input Programme	22341	
large size Black Demo	158	
Farmers Meeting	1980	Participation by 131860 Farmers.
Field Days	896	Attended by 103734 Farmers.
Crops Seminars	184	Participation by 64699 farmers.
Soil Testing Campaign	465	40295 samples were analysed and the results communicated farmers.

Plant Protection Campaign	637	More than 5886 ha. of crops covered against the possible attack of pests.
Seed Treatment Campaign	500	9617 Quintals of seed of various crops treated against.

From the very inception IFFCO has been conscious of increasing agriculture productivity by exposing the farmers to modern farming techniques and undertaking integrated rural development programmes for improving quality of rural life.

In recognition of these services IFFCO received the prestigious FICCI (Federation of Indian Chamber of commerce & Industry) Award for Rural Development 1988. The development of rural programme, IFFCO conducts various type of development work like farmers training, soil testing and farmers integrating programme etc.

SEED MULTIPLICATION PROGRAMME -

The society has undertaken the seed multiplication programme with a view to supplement the availability of quality seeds to farmers. Under this programme, quality seeds of wheat, rice, maize pigeonpea, pea, moong, bean, sunflower, soyabean and cotton were grown on farmers' fields. During 1996-97, 7786ha. were

covered under this programme against 5000ha. during previous year. The programme was implemented by IFFCO directly and also in collaboration with farmers and State Seed Corporations.

Farmers Training :

Cooperative Rural Development Trust (CORDET) established by IFFCO, has been conducting training programme at the Moti Lal Nehru Farmers Training Institute, Phulpur and also at Kalol for practising farmers to provide professional leadership at the village level for the development of agriculture and allied subjects.

The Moti Lal Nehru Farmers Training Institute at Phulpur organised one hundred twenty five training programme in which 1996 farmers were imparted training in farm management, crop imparted training in farm management, crop production, plant protection, dairy management, pollutry, horticulture and agriculture engineering. CORDET also produced and supplied quality crop seeds and sampling of fruit and ornamental and forestry plants. Production of biofertiliser, at CORDET, Phulpur, has also commenced during the year.

Soil Testing :

The mobile soil testing - cum publicity vans. Were in operation during the period for soil testing and publicity. The vans provide soil analysis facilities and audio- visual aids like 16 mm film projector, video and slide projector. During 1996, 42253 soil samples were analysed in different areas of Madhya Pradesh, Rajasthan, Haryana, Bihar and Uttar Pradesh and over 60,000 farmers benefitted. Besides 174 film show cum farmers meetings were organised.

Farmers Service Centre -

Apart from selling fertilisers through a network of more than 33,000 cooperative societies, the Society provided fertilisers and other agro inputs to the farmers, through a network of 1681 IFFCO Farmers Service Centre (FSCs) spread over twelve states and two union territories. Besides fertilisers, these centres, also provided quality seeds, agrochemicals, implements and modern agricultural technology to the farmers. During 1996-97, 1.36 lakh tonnes of fertiliser would sold to the farmers through the FSCs. In addition, these FSCs also sold seeds and agro chemical worth Rs.14.62 crore to the farmers during the year under report. The total turnover of the FSCs during the year was Rs.109.25 crore compared to Rs.86.16 crore achieved in the previous year.

IFFCO- NCDC Scheme -

IFFCO in Collaboration with NCDC has taken up the task of developing 2500 PACS on the lines of IFFCO Farmers Service Centres in a phased manner, under the scheme, NCDC provided a loan of Rs.424.94 lakh to IFFCO which was distributed as margin money loan at the rate of Rs.30,000/- per society. IFFCO also extended a subsidy of Rs.12,000 per society 50% of the subsidy amount was meant for procurement of farm equipments and the remainder for purchase of furniture/fixtures. Under this scheme Rs.115.80 lakh has been released to 1450 adopted societies.

During the year 1996-97 , IFFCO sold 2.40 lakh tonnes of fertiliser material through the cooperative societies covered under NCDC scheme, against last year's sales level of 2.30 lakh tonnes.

IFFCO chairs in Agriculture, Fertiliser Technology
and Cooperative Education -

IFFCO has undertaken a unique scheme of establishing professors chairs in Agriculture Universities with a view to strength the agriculture and cooperative education, and research activities in India. A total of fifteen IFFCO chairs ,

one each in 13 Agricultural Universities in the disciplines of soil science, Agronomy, Extension, and Agriculture Economics, one in Vaikunth Mehta National Institute of Cooperative Management Pune, on cooperative Management and a chair in the discipline of 'Fertiliser Technology' in College of Engineering at Banaras Hindu University has been established. Through these Professors chair IFFCO maintain its close relationship with the Universities engaged in active research and to keep abreast with the latest developments in different disciplines.

Balanced Fertiliser Programme

Special efforts were made to promote the concept of balanced fertiliser application through mass communication techniques like field demonstrations, soil testing, dissemination of information through printed literature in regional languages, radio and TV etc. Films on balanced fertiliser use were also produced and widely screened. Emphasis on soil testing and fertility mapping was given for effective soil fertility management. The message of balanced fertiliser application was the prime focus in all regular programmes of farmers meeting field day, crop seminar, farmers training, crop demonstration etc. During the year, IFFCO also continued the

incentive scheme of offering Rs.1/- per bag of 50 Kg. on the purchase of NPK/ DAP to promote balanced use of fertilisers.

PROGRAMME FOR FARMERS BENEFIT -

Number of Field Programmes organised during the year 1996-97 for the benefits of farmers were as under :-

PROGRAMME	NUMBER
<u>Field Demonstrations</u>	
Two Plot?	
Black Sowings	NO 1224 324
Critical Input Package	Na 2650 NO. 19915
Farmers Meetings	NO 2267 PP* 133630
Fields Days	NO. 740
Sales Point Personnel Training	No 1058 PP 54542
Crop Seminar	NO. 194 PP 97056
<u>Agricultural Campaigns</u>	
Soil Testing (Sample)	NO. 513 42253
Seed Treatment	No. 221 (atls) 4808

Social Campaigns

Tree Plantation (No. of trees)	No.	92
Medical Checkup	No.	24187
	PP	195
Veterinary checkup (No. of animals treated)	NO	60103
		90
		21436

* PP: Persons Participated

Special Projects -

During the year, IFFCO also launched certain special projects as part of rural development activities. These projects are for transfer of technology in dryland agriculture, tribal/backward area development, land reclamation, promotion of biofertilisers, biopesticides, use of plastics in agriculture, modern farm implements, micro-irrigation system, integrated plant nutrient management system (IPNS), wasteland development and watershed management etc. under the advice of the Ministry of Fertiliser and chemicals, Government of India two districts viz Madhubani (Bihar) and Jhuni Jhunu (Rajasthan) were also adopted during 1996-97 for agricultural development in the selected cluster of villages. Another IPNS project in collaboration with FAO was also in progress during the year under report. This project envisages bringing out an IPNS manual based on IFFCO-IPNS experience for extension workers and others.

Some of the important special projects implemented during 1996-97 includes drip irrigation in Havali block of Pune district, Maharashtra, promotion of bio-pesticides in the state of Punjab, Haryana, Rajasthan, Himanchal Pradesh and Jammu and Kashmir. Biofertilisers in the state of Assam, Orissa and West Bengal use of plastics in agriculture in the state of Bihar and Uttar Pradesh and agriculture implements in the state of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu.

The Phulpur unit of the Indian Farmers Fertiliser Co-operative Limited has once again proved itself to be a model fertiliser plant in the field of environment management and water conservation by starting a 'reverse osmosis effluent treatment plant'.

According to a Press release, the newly constructed reverse osmosis effluent treatment was inaugurated by Mr US Awasthi, the managing director, IFFCO, on Monday. The general managers, Mr P.K. Kundu and Mr. S. Ramani and other senior officers of the plant were present on the occasion. members of the IFFCO Karmachari Sangh, IFFCO officers Association and representative of the

M/s Ion exchange (India) Limited, Mumbai, were also present on the occasion.

In this plant, treatment of liquid effluent is done in two stages. In first stage it is treated in pre-treatment section and in second stage it is fed into RO Membrane skids. After treatment in RO plant, the liquid is recycled and reused in the plant process itself.

The newly installed RO plant is capable to treat 600 cubic meter of industrial effluent per day and the total cost of this plant is Rs.8.5 crore. The plant is equipped with a computerised control system.

The plant has been engineered, supplied and installed by Ion exchange India Ltd., Mumbai.

The 'reverse osmosis technology' has been provided by M/s Hydranautic, USA.

With the installation of this reverse osmosis effluent treatment plant, there has been considerable reduction in this fresh water consumption and it is great achievement in the field of environment management and water conservation.

B. EMPLOYEES WELFARE :

Over the year, IFFCO has enjoyed reputation for its corporation excellence based on a positive belief in the welfare of its people like training programmes , welfare activities. etc.

Human Resource organisation Development Activities:

IFFCO continues to place special emphasis on Human Resources Development through imparting training its work force in their respective functional areas as well as general management etc. On one hand and transferring the technical know-how of agricultural production to farming community on the other. During the financial year 1996-1997 , following training programme were organised:-

- A. 15 in- service training programmes for marketing field staff.
- B. 25 village coordinators training programme.
- C. 163 IFFCO Personnel sponsored for various training programmes conducted by well known training institutes within the country.

A large number of well designed , high quality and result oriented training programme were organised during the year 1996-97.

Two special workshops were organised at VAMNICOM, Pune for the West Zone and at the Institute of Cooperative Management, Chandigarh for the North Zone to develop strategies for increasing the share of cooperatives in fertiliser sale. A one week orientation programme in cooperative Philosophy and rural communication was organised at VAMNICOM, Pune for imparting knowledge to participants on principles of cooperation, cooperative Philosophy and fertiliser marketing through cooperatives. A two week management development Programme for marketing officials was organised in Collaboration with IRMA, Anand. Training Programme on awareness, documentation and implementation of ISO-9002 in marketing division had been launched during March 1997.

Six corporate level management development Programmes of 2 to 4 weeks duration were organised during the year 1996-97 to provide an understanding of various management functions with a multidisciplinary approach alongwith value based management. About 200 Junior and middle level managers from all units participated and derived benefits.

Training programmes on Computer awareness received high priority during the year in line with the corporate computerisation policy. HRD activities have a major impact on individual performance and hence productivity and organisational performance. The cycle of human resource activities is highly interdependent.

The human resource system in therefore only as strong as its weaker link. Effective strategic management requires effective human resource management.

We conclude an discussion with the following words of peter F. Drucker "To make the whole that is greater than the sum of its parts hat since plato's days been the definition of the "Good Society".

C. Performance Appraisal System -

During the period under review the new performance appraisal system has introduced at managers level and above. The overhaul of the system was undertaken after taking the views of a large cross section of officers at Plant, Marketing Division & Head Office.

Celebration of 50th years of Independence-

As a part of our country's 50th years of Independence Celebration; IFFCO has launched an ambitious programme for :

- : Farmers education and balanced fertilisation.
- : Grassroot cooperative development.
- : Dedication of Aonla, Kalol and Phulpur Expansion Project and laying of the foundation stone of grassroot Ammonia- Urea Complex at Nellore.

The society has decided to adopt 500 village level cooperative societies in different states for strengthening their financial, infrastructural and managerial capacities. For this purpose, IFFCO will provide a financial support amounting to Rs.60,000/- to each of the adopted societies. This amount is proposed to be spent on purpose of warehousing damage and need based agricultural equipments, incentive of society, distribution of technical literature, scientific display boards, fixtures and furniture, part salary of one employee and other location specific activities based on individual requirements of the societies.

IFFCO is also planning to establish 50 storage - cum- community centres spread over almost all the states to provide information on agricultural

technology to the farmers. These are also expected to serve as centres for organisation social and agricultural extension activities. The estimated expenditure for establishing each storage cum-community centre is about Rs.200 lakh.

All the IFFCO Plants projects, corporate office, Zonal, State and area level offices of IFFCO will carry out welfare activities for farmers like providing drinking water facilities in villages construction of school and bus stops, renovation of school buildings, supply of books and equipments, medical checkup, eye camps and specific location activity in other areas.

Publicity

IFFCO has successfully evolved an effective multi-media approach to project its corporate image and also to popularise its products and service to meet the changes arising out of decontrol of Phosphatic and potassic fertilisers. Press, Doordarshan and All India Radio have extensively been used to promote the concept of balanced fertiliser use among the farmers.

The societies organised the "Agro-Tech 1996 exhibition" on a large scale for 10 days at Patna

in December, 1996 to familiarise the farming community, particularly from Bihar, with latest trends in agriculture technology, balanced use of fertilisers seed production and sericulture. The exhibition was visited by thousands of farmers.

Video films on balanced fertilisation have been produced in almost all regional languages. One such video film in Telugu "Pasidi Pantalu" was adjudged as the second best film by Fertiliser Association of India (FAI).

IFFCO News, the corporate in house Journal, received the "Best House Journal Award" from both Hyderabad chapter of Public Relation Society of India and Public Sector PR Forum, New Delhi.

Computer And Communication -

During the year under report, the infotech infrastructure of the society received a major boost with the signing of an MOU with NIC to supply and install high speed Vs ATs. The installation of high speed VSATs would facilitate establishment of a Wide Area Network (WAN) between the corporate office, four plants and five Zonal officers, state/ area offices in a phased manner. Substantial increase in the speed of

communication and accuracy of information is expected to be achieved through the proposed WAN. A number of training programmes were undertaken to update the skills of personnel of the society in different computer language.

Community Development -

IFFCO continues to pay special attention to the community development programmes for the spouses and children of the employees were organised at all the units focussing on self- awareness. Thinking skills and creative visualisation and communication skills. Yoga training for maintaining a sound, physical and mental health of the employees and their family members were also undertaken to enrich the quality of life in township. Events like annual quiz on "Tourism in India" and debate on those who forget history are condemned to repeat. It received large participation from children from all the units.

Sports Promotion -

IFFCO sports Promotion Council Continued its efforts to promote sports within and outside the organisation. IFFCO gave facilities in different type of games like Table Tennis, Badminton

Cricket, Billiards etc. During the year under review, 2nd Inter unit sports Festival was organised at Kandla from 24th to 28th December 1996 in which about 300 players for all unit participated. The 3rd Inter unit cricket Tournament was organised at Aonla from 16th to 30th March 1997. IFFCO continued to sport National level associations in organising various sports. The 6th International Women's Hockey Tournament and 7th Lal Bahadur Shastri Tournament held at New Delhi were co-sponsored by IFFCO during 1996-97.

Industrial Relations -

The foundation of IFFCO's industrial relation is based on mutual cooperation and Joint consultation. The industrial relations during the year continued to be very cordial. The dedicated work done by the employees at all levels, enabled the society to set a new milestone in its history by completing the Aonla Expansion Project, Within the stipulated cost and time. No loss of mandays on account of strike or lock out from any unit was reported during the period under review.

C. SOCIAL ACTIVITIES -

Village Adoption -

IFFCO has implemented the village adoption programme since its inception, in order to bring about overall improvement in the living standards of the rural community through integrated rural Development Programmes with special emphasis on agricultural development. The number of the villages presently covered under the programme stands at 465. Till now, IFFCO has adopted more than 2300 villages in the country. Besides fertilisers, promotional activities, social welfare programmes like medical care, provision of drinking water, veterinary services and installation of Bio- gas plants etc. are being carried out in these villages.

Tribal and Backward Area Development -

IFFCO has set up to farmers and community centre in tribal and backward regions of Maharashtra Madhya Pradesh and Tamil Nadu. These centres serve as nodal points for supplying farm inputs providing technical guidance on improving farming, health and veterinary care and extending recreational and educational facilities to farmers of cluster of village.

Tribal women are being exposed to new farming methods and cottage industries based on agriculture, animal husbandary, beekeeping, dairying, piggyery hygiene and home management.

Research And Development

IFFCO has given due importance in refurbishing the R & D structure for upgradation of technology in use and aspects relating to renewable energy, bio-technology, farm and agriculture technology and water resource management.

FARM FORESTRY PROJECT - (Pilot Project)

As part of the society's broadbased ideological efforts for the overall development of rural areas. IFFCO started promoting independent primary level farm forestry cooperatives. The approach of project is based on national efforts : rescuing the country from the present day ecological crisis.

In pursuance of national priority of afforestation, IFFCO started the Farm Forestry Project in Uttar Pradesh, Madhya Pradesh and Rajasthan from 1986-87. Under the Pilot Project 32 Primary Farm Forestry Cooperative Societies were setup. Afforestation work has been carried out on 4609 hectares of wastelands. The tree species out on 4609 hectares of wastelands. The tree species planted include timber, fuel , fodder and fruit

in a suitable mix to meet the basic needs of farmer members.

Upto 31st March, 1997, the society has spent Rs.6.24 crore on the Pilot Project, out of this, Rs.1.82 crore has been met out of IFFCO's resources and the balance from grants-in-aid of Central/ State Government Agencies.

IFFDC Projects -

IFFCO promoted a seperate cooperative society, named as Indian Farm Forestry Development Cooperative (IFFDC) for implementing afforestation work in the states of U.P. Rajasthan and M.P. in accordance with the contribution agreement signed between IFFCO and Indian- Canada Environment Facility (ICEF). The IFFDC Project was sanctioned for a period of 5 years w.e.f. 1st April 1995.

ICEF propose to contribute Rs. 31.50 crore and ICEF propose to contribute Rs.31.50 crore and IFFCO Rs. 3.50 crore. The project undertakes afforestation work in 20,000 hactares through 90 primary Farm Forestry Societies, there are being organised in due course. The emphasis is on integrated natural resources management activities, soil and water conservation work

and enhanced participation of landless, small and marginal farmers with the emphasis on women members participation.

During the year 1996-97, 42 Primary Forestry Cooperative Societies (PFFCS) have been formed and 2778 ha. of area has been covered under plantation. Thus, so far a total of 64 PFFCS and 3557 hectares of plantation have been completed since the inception of the IFFDC project.

Total expenditure incurred on the IFFDC Project upto 31st March 1997 was Rs.6.10 crore of which Rs. 1.23 crores was IFFCO's contribution and the balance Rs.4.87 crore was met from ICEF grant-in-aid.

IFFCO has gone a long way in overcoming the major problems of supply of adequate quality of foods to our countryman. This cooperative society has to shoulder the further responsibility of keeping the supply line of fertiliser duly maintained in accordance with the needs of the farmers. Fertiliser being basic inputs for agriculture, it should be made available to the farmers timely , adequately and at reasonable

price. IFFCO, being an unique experiment of producing fertiliser in the cooperative sector , is certain , fulfilling the goal set before it. However, with the liberlisation and globalisation of the economy, IFFCO will have to face the challenge of imported fertiliser of better quality and a cheaper rate. If has to gear itself to this challenge and produce quality fertiliser at lower cost. So far it has been pride of the country and it must strive harder to maintain this position.

CHAPTER - III

CONCEPT OF WORKING CAPITAL

CHAPTER - 3

CONCEPT OF WORKING CAPITAL

The problems of working capital cannot be generalised for all the business concern in one norm and, thus, it is necessary to deal with the situation of an individual business concern on the basis of the principles laid down by the authorities. The importance of working capital in any industrial concern need not be over emphasised. The existence of an adequate supply, carefully administered, can make substantial differences between the success and failure of a business concern. Even in a well established business with a long history of successful operation careful attention to the management of working capital can result in greater profitability. When working capital is varied relative to sales without corresponding change in production the profit position is effected further more, If the flow of funds created by the movement of working capital through the various operational process is interrupted, the turnover of working capital and return on investments decreases. It is important, therefore, for management to pay particular attention to the planning and control of working capital.

1. Walkar, Earnest, W., "Essential of Financial Management, II, ed., p. 59.

The effective management of working capital calls for careful short-range and long-range cash flow budgeting based on sound operating budgets, various analysis at regular intervals, careful control of credit and collection period, proper handling of inventory etc. It also calls for Judicious handling of funds not otherwise employed and proper use of bank advances to finance seasonal requirements of the business for its expansion programmes.

Thus, management of working capital is by no means an easy task but presents a stimulating challenge to the financial executive. It requires his constant attention and exercise of skill and Judgement, though knowledge of business, an awareness of economic trends and familiarity with the money market.

As the degree of effectiveness which it is performed affects future as well as current results, no industrial concern should fail to appreciate the vital importance of this aspect of its administration.

Meaning of Working Capital :

Capital refers to that part of the asset which is used for further production. For Economists

Capital is the produced wealth intended to produce more wealth in future¹. In commerce capital was first used as an interest bearing sum of money.² From the view point of a nation, the money itself is not a capital but only a measuring rod of value of different assets, which when added together will form the capital of a nation.³ Money is source to purchases capital equipment for individuals and firms. Hence, it is capital for them. Any assets or equipment having the ability to create money return is capital and such asset may be a part of capital one day and may cease to next day, if it withhold to create money return or is used for consumption purpose. Besides, goods used for personal pleasure are also not capital because they are not creating any money return.

1. The New Croxton Encyclopedia, Vol.4 London, Croxton publishing company, 1969, p.1053

2. Encyclopaedia of Social Sciences, Vol.III and IV New York Macmillian Company, 1963, p.189.

3. The New Croxton Encyclopaedia op. Cit. p.1053.

"Capital", in economics, is a stock of accumulated wealth which is used in the process of production in order to generate more wealth, rather than being directly consumed.¹ Capital may enter production in the form of buildings, equipment and machinery, raw materials or semi-finished goods for further processing and so on. However, economists are interested on the 'real' value of capital as apposed to the accounting people who are interested on its 'financial' value.² Thus, to be a capital an asset must generate or intend to generate income, either in terms of cash or in goods and services convertible into cash.

The capital, put into business for further production, may be distinguished as 'fixed capital' and 'working capital'. Fixed capital represents permanent assets i.e. lands, buildings, equipments and machineries, which remain intact (subject to the depreciation) during the production of

1. Everyman's Encyclopaedia Vol.2. London, J.M. Dent & sons , 1978, p.719.

2. Encyclopaedia Britanica, Vol.4, London, EncyclopaediaBritanica Inc., 1965, p.835.

goods or services and have longer life than one operating period of the business. The assets representing working capital are stocks, receivables and cash , which change their forms frequently during the course of operation. "Differences in divisibility as well as in durability of economic life are the essential features that distinguish current from fixed assets".¹ It is the general assumption of the accountant that the life of fixed assets is more than an accounting year, whereas, the life of the current assets is less than or equal to that period. Hence the current assets are normally converted into cash within one year's time.

In the financial and accounting word, the term, " working capital" is often misunderstood. There seems to be no unanimity the concept of working capital amongst its users. It either lacks correct understanding or perhaps the users lack uniformity in the application of this term. This is an established fact because working capital is not shown in account form in the "Financial Statement". Due to this disagreement , some

1. J.C. Van Horne, Fundamentals of Financial Management, New Delhi , PHI, 1978, p.78.

finance experts are of the view that it is better to avoid the expansion of working capital altogether. Though there is no confusion regarding the distinction between working capital and fixed capital.

In analysing its synthesis or antithesis, the two terms, viz., working and capital are to be studied separately.

The term working means contributing in some way to profits or engaging in some productive work. It implies a distinction between capital that makes such contribution or engaged in some productive working. It also implies a distinction between capital that makes such contribution or engaged in production that does not work i.e. non-working.

On this basis the amount of non-working capital appearing in the Balance sheet is likely to be modest because no management would like to keep a non-productive item in its business for any length of time and almost all the money invested in a business is called "Working Capital". But such is not the case and therefore,

this, interpretation need not be given a serious thought. To avoid the notion of "Productive" or Non-productives", the meaning of "working" may be limited to consumed during the year in creating current profits. This idea, indicates that the value of that portion of firms, land, building equipment and other fixed assets which are applicable to the production of current, distinguished from future, fall within the scope of working capital.

The term working therefore means the circulation of capital in one form or another during the day to day operation of the business.

In other words, working capital includes fixed tangible and intangible assets to the extent of next year depreciation or ammortisation. Considering this view of the term working, the fixed assets trangible - intangible both, should be reclassified by splitting the amount traditionally shown under "Fixed assets" in the Balance Sheet into working and non-working Categories. Since it involves innumerable accounting problems, it cannot be recognised a practical concept.

Capital in the business sense means the actual wealth or assets of a business in money, such "Assets" may be "Tangible" or "Intangible". Thus, in the business, the word "capital" is money on money values used in the business regardless of source of obtaining it. For term "Capital" it is as the synonymous with the "Total Assets".

An industry or any business concern requires funds (capital) for, acquiring, fixed assets' like land , building, plant, machinery , equipment, vehicles, tools, etc. and also for, its day-to-day operation, viz., purchase of raw-material, payment of labour, power etc., storing of finished goods till they are sold out and it sold on credit , Bills Receivables, The former type of funds are known as 'Fixed Capital' and the latter as "Working Capital".

In other words, we can say that the "Working Capital" is the funds needed to carry the required levels of current assets, to enable the industry to carry on its operations at the expected levels uninterruptedly.

Regarding the term "Working Capital" those who define "Capital " as the excess of total assets over total liabilities define it as the excess of current assets over current liabilities.^{1,2,3}

Those who believe that the capital is the actual wealth or Assets of a business in money whether tangible or intangible, accept the working capital is the sum of all the "Current Assets" ^{4,5}

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1. Gatheman, H.G. and Dougall, H.P. "Corporate Financial Policy", III ed; p.387.
 2. Keneddy, R.D. & Maemullen, S.Y., "Financial Statement Form Analysis and Interpretation, Vth, ed, p.266.
 3. Gole, V., "The Management of working capital", The Australian Accountant, Mellroum, Vol. XXIX June 1959 , p.319.
 4. Mead, Edward, "Corporation Finance", p.303.
 5. Kenneth, Field, "Corporation Finance". p.173-180.

Current assets include cash and rearing cash items, receivables, inventory, short investments, etc. while current liabilities include short term loans from banks and other financial institution, trade creditors and other current liabilities.

Several experts in the field of finance accept that the term working capital may be defined on the basis of two classifications or concepts, viz. "Net working capital" and "Gross working capital" where net working capital is the difference between current assets and current liabilities while assets, or that amount of funds invested in current assets, or that amount of funds invested in current assets that are employed in the business process.^{1,2,3}

The term working capital often is used to refer to the firm's current assets, and net working capital to refer to current assets less current liabilities.⁴

1. Walkar, E.W., Op. Cit., p. 49 and 50.

2. Kuchhal, S.C., Financial Management and Analytical and Conceptual Approach," p.155.

3. Financial Management Handbook, A Gowar press Handbook, p.61.

4. Solomon & Bringle, An Introduction to Financial Management, New Delhi, PHI, 1978, p.53.

"Any acquisition of funds which increase current assets increases working capital for they are one and the same".¹

"The individual entrepreneur regarding as working capital that part of his capital which is released when he stops producing".²

Considering various definition of working capital in brief it can be said that working capital is that part of total capital employed in short term operations or day to day operations.

This concept of "Net working capital" represents the volume of current assets are being financed by long term sources through, current assets and liabilities are turned over within relatively short period of time, the net balance of current assets, is that proportion which is also useful to the member of account any profession, investors, creditman, and other whose task is to judge the liquidity and financial soundness of the business undertaking. The short term financers and creditors are interested

1. Boneville and L.E. Dewey as quoted by Gilbert Harold corporation Finance, New York, Barnes and Noble Inc. 1947. pp. 123-124

2. F. Machleep, The Stock Market, Credit and Capital Formation, London, W.H. & Co. 1940, p.202.

in knowing the margin of protection available to meet their commitments fully without any loss. For them it is not the sum total of current assets in excess of current liabilities. It provides a measurement or an assessment of the strength of current assets and is useful for assessing the financial position of the business.

The gross working capital concepts presents the financial problem of how to manage the individual components of which comprise the list of current assets. It is that portion of working capital which circulates from one or from other heads of Assets in ordinary conduct of business. It flows from "Cash" to "Inventories" to "Production" to "Receivables" and back, to "Cash". These assets are also treated as "Circulating Assets".¹ This concept shows total funds available to the business for operation irrespective of sources to obtain them.

1. Hampton, John, J. "Financial Decision Making Concepts Problems and Cases, Indian. Reprint, p.125.

This net aspect of working capital is of particular importance as it is the sum which must be found by proprietors of the business whether in the form of permanent capital by means of external borrowings on long or medium term basis or by internally generated funds.

The concepts indicates that the working capital would be financed only from shareholders equity, long term equity, retained earnings and sale fixed assets. Thus, workingt capital cannot be increased by short-term borrowings which is an important source of fund for operational needs. Prof. Kuchhal says that the "Net concept of working capital is a long run view. The operation of current assets which is constant in short-run analysis and decision making but variable and manageable in long run operations.¹

From management point of view "Gross working capital" is of paramount interest as it is not only shows "Firms credit worthiness" but is based on "Going concern" concept, since it is these assets that financial managers

1. Kuchhal, S.C, Op. cit., p.155.

are concerned with if they are to bring productivity from other assets and to realize greatest return on investments.¹

Management has to pay attention to the total amount of current assets and their profit earning capacity so that it is higher than cost of borrowings.² The firm cannot increase its net working capital by borrowing money from short term sources, but gross working capital can be. Thus, net concept of working capital is important to measure the liquidity of a firm, whereas the management of working capital is concerned the gross concept is relevant and management also prefers gross working capital or total assets concept.³

The nature of working capital permits to subdivide it into two classes, i.e. permanent or fixed working capital and temporary or variable working capital. To ensure the smooth running of an organisation a minimum balance of cash,

1. Walker, S.W. Op. Cit., p.60

2. Kuchhal, S.C., op. cit., p.155

3. Husband and Drockaray, Mordern Corporation Finance, Illinois, Richard D. Irwin Inc., 1966, p.536.

inventory and receivables are always maintained without the consideration of their use and this constitutes 'permanent working capital' on the other hand, the current assets added (over and above the minimum balance) in the peak seasons of operation or called "temporary working capital" and this is an important consideration for "financing period". Temporary or variable working capital funds represent additional assets required at different time during the operation year. Such working capital varies with seasonal and cyclical variation in the business.

'The amount invested in various current assets at a point of time should neither be less nor more than what it ought to be. The investment in current assets becomes a less profitable business in comparison to the investment in current assets becomes a less profitable business in comparison to the investment in fixed assets. However, the necessary investment in current assets is binding to the firm to secure its liquidity as against the profitability. Profitability and liquidity are the twin objectives of financial management, Challenging the job of the financial manager

manager to maintain balance in between these two. As Walker states, "when the level of working capital relative to sales decreases, the opportunity for gain from investment increases and vice-versa."¹ Therefore, the main theme of the theory of working capital management is the interaction between current assets and current liabilities.

Excess or Inadequate working capital :

The firm should maintain a sound working capital position. It should have adequate working capital to run its business operations. Both excessive as well as inadequate working capital positions are dangerous from the firm's point of view. Excessive working capital means idle funds which earn no profits for the firm. Paucity of working capital not only impairs firm's profitability but also results in production interruptions and inefficiencies.

1. E.W. Waliker, Essentials of Financial Management, India P.H.I. 1974, p.61.

The dangers of excessive working capital are as follows :

1. It results in unnecessary accumulation of inventories. Thus, the chances of inventory mishandling, waste, theft and losses increase.
2. Tendencies of accumulating inventories to make speculative profits grow. This may tend to make dividend policy liberal and difficult to cope with in future when the firm is unable to make speculative profits.
3. Excessive working capital makes management complacent which degenerates into managerial inefficiency.
4. It is an indication of defective credit policy and slack collection period. Consequently, higher incidence of bad debts results, which adversely affects profits.

Inadequate working capital is also bad and has the following dangers :

1. It stagnates growth. It becomes difficult for the firm to undertake profitable projects for nonavailability of the working capital funds.
2. It becomes difficult to implement operating plans and achieves the firm's profit target.

3. Fixed assets are not efficiently utilised for the lack of working capital funds, thus, the rate of return on investment slumps.
4. Operating inefficiencies creep in when it becomes difficult even to meet day to day commitments.
5. The firm loses its reputation when it is not in position to honour its short term obligations. As a results, the firm faces tight credit terms.
6. Paucity of working capital funds renders the firm unable to avail attractive credit opportunities.

An enlightened management should, therefore maintain a right amount of working capital on continuous basis. Only then a proper functioning of the business operations will be ensured. Sound financial and statistical techniques, supported by judgement, should be used to predict the quantum of working capital needed at different time periods.

DETERMINENTS OF WORKING CAPITAL

Industrial concerns, generally, require a large amount of working capital, although it varies from business to business because of lack of uniformity characterizing each field of enterprises. However, the underlying determinants of the amount are essentially the same as in the earlier groups. Where large amounts of fixed capital are required for operation,

working assets may be expected to occupy a smaller niche in the assets structure. For similar reasons, a rapid turnover of capital (sales divided by total assets) will inevitably mean a large proportion of current assets. In the case of industries with large fixed investment, one of the primary uses of working capital is its conversion into operating plant structure. In turn, it is expected that the income realized from operations will normally replace such defections. This means that the flow of a portion of the working capital is circulated through fixed investment and that its recovery is dependent upon the income realized where the current assets are relatively more important, a rapid sales turnover usually found. Often, as in the case of retail concerns, the specific working assets constitute the object of sales and the recovery is direct and immediate. In manufacturing enterprises, a large share of the working capital is more likely to become changed in form by conversion into finished products, but even here, the potentiality of recovery is not delayed as long as in the case of public utilities. The need for working capital varies with changes in the volume of business. A considerable proportion of current assets is needed permanently as fixed assets. More than one production cycle may be in process at one and the same time, for a business

operates on a continuing basis. Material are purchased and work is in progress. Finished inventory is sold. At the same time, new receivables accumulate and old ones are converted into cash. Cash is utilised in the production process.

The following factors determine the amount of working capital :-

Nature of Industry :

The composition of an assets is a function of size of a business and industry to which it belongs. Small companies have smaller proportions of cash, receivables and inventory, than, large corporations. This difference becomes more marked in large corporation. A public utility, for example, mostly employs fixed assets in its operations, while a merchandising department depends generally on inventory and receivables. Needs for working capital are thus determined by the nature of an enterprise.

Creditors are interested in the security of loans. They want their obligations to be sufficiently covered. They want the amount of security in assets which are greater than the liability.

Cash is one of the current assets which is essential for the successful operations of the

production cycle. Cash should be adequate and properly utilised. It would be wasteful to hold excessive cash. A minimum level of cash is always required to keep the operation going. Adequate cash is also required to maintain good credit relations. Richards Osborn has pointed out that, cash has a universal liquidity and acceptability. Unlike illiquid assets, its value is clear-cut and definite.

The nature of a business is an important determinant of the level of the working capital.

Working capital requirements depend upon the general nature or type of business. They are relatively low in public utility concerns, in which inventories and receivables are rapidly converted into cash. Manufacturing organisations, however, face problems of slow turnovers of inventories and receivables, and invest large amounts in working capital.

The level of working capital depends upon time required to manufacture goods. If the time is longer, the size of working capital is great. Moreover, the amount of working capital is great. Moreover, the amount of working capital depends upon inventory turnover and the unit cost of the goods that are sold. The greater this cost, the bigger is the amount of working capital.

This is the most important factor affecting the size and components of working capital. A firm maintains current assets because they are needed to support the operational activities which result in sales. The volume of sales and the size of the working capital are directly related to each other. As the volume of sale increases, there is an increase in the investment of working capital— in the cost of operations in inventories and in receivables.

It is necessary to have an effective control of receivables. A prompt collection of receivables and good facilities for setting payables result into low working capital requirements.

If the inventory turnover is high, the working capital requirements will be low. With a better inventory control, a firm is able to reduce its working capital requirements. While attempting this , it should determine the minimum level of stock which it will have to maintain throughout the period of its operations.

If the credit terms of purchases are more favourable and those of sales less liberal, less cash will be invested in inventory. With more less

favourable credit terms, working capital requirements can be reduced. A firm gets more time for payment to creditors or suppliers. A firm which enjoys greater credit with banks needs less working capital.

Business expands during periods of prosperity and declines during the period of depression. consequently, more working capital is required during the period the periods of prosperity and less during the periods of depression. During marked upswings of activity, there is usually a need for larger amounts of capital to cover the lag between collection and increased sales and to finance purchases of additional materials and wages tend to rise and require additional funds to carry even the same physical volume of business. In the downswing of the cycle, there may be a breif period when collection difficulties and declining sales together cause embarrassment by the resulting failure to replenish cash. Later, as the depression runs its course, the concern may find that it has a larger amount of working capital on hand than business volume may justify.

A seasonal business requires the maximum amount of working capital for a relatively short period of time.

The time taken to convert raw materials into finished products is referred to as the production cycle or operating cycle. The longer the production cycle, the greater is the requirement of working capital. An almost care should be taken to shorten the period of the production cycle in order to minimize working capital requirements.

A decrease in the real value of current assets as compared to their book value reduces the size of the working capital. If the real value of current assets increases, there is an increase in working capital.

Credit control includes such factors as the volume of credit sales, the terms of credit sales, the collection policy, etc. with a sound credit control policy, it is possible for a firm to improve its cash inflow.

As a result of inflation, size of the working capital is increased in order to make it easier for a firm to achieve a better cash inflow. To some extent, this factor may be compensated by the rise in selling price during inflation.

If a firm desires to take a greater risk for bigger gains or losses, it reduces the size of its working capital. However, this policy is likely to result in a reduction of the sales volume, and, therefore, of profitability. A firm, therefore, should choose between liquidity and profitability and decide about its working capital requirements accordingly.

A firm's repayment ability determines level of its working capital. The usual practice of a firm is to prepare cash flow projections according to its plans of repayment and to fix the working capital levels accordingly.

The level of working capital is decided by the management in accordance with its policy of profit planning and control. Adequate profit assists in the generation of cash. It makes it possible for the management to plough back a part of its earning in the business and swortantially build up internal financial resources. A firm has to plan for payments, which are an important part of working capital management. Often the dividend policy of a corporation may depend upon the amount of cash available to it.

Seasonal fluctuations in sales affect the level of variable working capital. Often, the demand for products may be of a seasonal nature. Yet inventories have got to be purchased during certain seasons only. The size of the working capital in one period may, therefore, be bigger than that in another.

Working capital turnover is improved with a better operational and financial efficiency of a firm with a greater working capital turnover it may be able to reduce its working capital requirements.

It would be necessary for a firm to maintain some cash reserves to enable it to meet contingent disbursement. This would provide a buffer against abrupt shortages in cash flows.

A firm's size, either in terms of its assets or sales, affects its need for working capital. Bigger firms, with many sources of funds, may need less working capital as compared to their total assets or sales.

A firm's stocking on heavy inventory or selling on easy credit terms calls for a higher level of working capital for it than for selling services or making cash sales.

Technological developments related to be process have a sharp impact on the need for working capital.

The greater the amount of working capital, the lower is the risk of liquidity.

These affect the levels of permanent and variable working capital changes in credit policy, production policy etc. are bound to affect the size of working capital.

Whenever there is current strain, it has to be immediately diagnosed on the basis of the red signals which manifest themselves in the operations. The cause should be ascertained by making a thorough study of the components of current assets and current liabilities. If stock is not moving fast, and if there is an excess inventory buildup, corrective steps should be taken to sell the stock or bring down its level. If the receivables have become sticky, effective recovery steps should be taken to reduce the debts and to increase the collections. Sometimes short-term funds have been used to finance fixed assets , and this creates the "Current" strain. This imbalance in the pattern of financing should be set right by raising long-term funds on the cover

of fixed assets so that the current strain may be wiped out. Similarly, if current funds are diverted outside when they are badly required within the firm itself, it would be very difficult to run the business. External diversion may be for the purpose of outside, investment, advances to others or for various other purposes. The situation can improve only if this external diversion is stopped. If the strain is allowed to continue because of involvement in any other business or industry, the consequences may be disastrous. In such a situation, the ability to meet current demands deteriorates; short term credits are not forthcoming; production is affected; sales decline, cash flow dwindles income may disappear, and the whole enterprise may get into to red over a period of time. Only a concern which manages its assets and liabilities in a planned and projected way on the basis of its cash budgets and cash flow estimates to cover short term as well as long term situations can sustain a current strain. The restrictions expressed as ratios of the elements of current assets and current liabilities are frequently referred to as current position constraints and include the current ratio, the acid test ratio, and so-called "compensating balance " ratio (a minimum ratio of a borrower's balance to the amount of the loan, as required by some banks). Contracts with fund suppliers frequently provide for current-position constraints.

Growth and Expansion :

As a company grows , it is logical to expect that a large amount of working capital will be required. It is, of course, difficult to determine precisely the relationship between the growth in the volume of business of a company and the increase in its working capital. The composition of working capital in a going company also shifts with economic circumstances and corporate practices. Other things being equal, growth industries require more working capital than those that are static. "The critical fact, however, is that the need for increased working capital funds does not follow the growth in business activities but precedes it."

Vagaries in the Availability of Raw Materials:

The availability or otherwise of certain raw materials on a continuous basis without interruption would sometimes affect the requirement of working capital. There may be some materials which cannot be procured easily either because their sources are few or they are irregular. To sustain smooth production therefore, the firm might be compelled to purchase and stock them for excess of genuine production needs. This will result in an excessive inventory of such materials. The procurement of some essential raw materials which are in short supply and are controlled

to ensure equitable distribution. The buyer has in such cases very limited options as to the quantum and timing of procurement. It may so happen that a bulk consignment may be available but the firm may be short of funds, while when surplus funds are available the commodities may be in short supply.

This element of uncertainty would lead to a relatively high level of working capital. Finally, some raw materials may be available only during certain seasons. They would have to be necessarily obtained, when available to provide for a period when supplies are low. This will cause seasonal fluctuations in working capital requirements.

Profit Level :

The level of profits earned differs from enterprise to enterprise. In general, the nature of the product, hold on the market; quality of management and monopoly power would by and large determine the profit earned by a firm. A priori, it can be generalised that a firm dealing in a high quality product, having a good marketing arrangement and enjoying monopoly power in the market, is likely to earn high profits and vice-versa. Higher profit margin would improve the prospects of generating more internal funds thereby contributing to the working capital pool. The net profit is a source of working capital to the extent that it has been earned in

cash. The cash profit can be found by adjusting non cash items such as depreciation, outstanding expenses and losses written off, in the net profit. But, in practice, the net cash inflows from operations cannot be considered as cash available for use at the end of the cash cycle.

The availability of internal funds for working capital requirements is determined not merely by the profit margin but also on the manner of appropriating profit. The availability of such funds would depend upon the profit appropriations for taxation, dividend, reserve and depreciations.

Level of Taxes :

The first appropriation out of profits is payment or provision for tax. The amount of taxes to be paid is determined by the prevailing tax regulations. The management has no discretion in this respect. Very often taxes have to be paid in advance on the basis of the profit of the preceeding year. Tax liability is, in a sense, short term liability payable in cash. An adequate provision for tax payments is, therefore, an important aspect of working capital planning. Tax planning can, therefore, be said to be an integral part of working capital planning.

Dividend Policy :

Another appropriation of profits which has a bearing on working capital is dividend payment. The payment of dividend consumes cash resources and, thereby, affects working capital to that extent. Conversely, if the firm does not pay dividend but retains the profits, working capital will increase. In planning working capital requirements, therefore a basic question to be decided is whether profits will be retained or paid out to shareholders.

Depreciation Policy :

Depreciation Policy also exerts an influence on the quantum of working capital. Depreciation charges do not involve any cash outflow. The effect of depreciation policy on working capital is, therefore, indirect. In the first place, depreciation affects the tax liability and retention of profits. Depreciation is allowable expenditure in calculating net profits. Enhanced rates of depreciation will lower the profits and therefore tax liability and thus, more cash profits. Higher depreciation will also mean lower disposable profits and, therefore, a smaller dividend payment. Thus, cash will be preserved. In the second place, the selection of the method of depreciation has important financial implications.

If, current capital, expenditure falls short of the depreciation provisions, the working capital position is strengthened and there may be no need for short-term borrowing. If, on the other hand, the current capital expenditure exceeds the depreciation provision either outside borrowing will have to be resorted to or a restriction on dividend payment. Coupled with retention of profits will have to be adopted to prevent the working capital position from being adversely affected. It is in these ways that depreciation policy is relevant to the planning of working capital in a firm.

Price Level changes :

Changes in the price level also affect the requirements of working capital. Rising prices would necessitate the use of more funds for maintaining an existing level of activity. For the some level of current assets, higher cash outlays will be required. The effect of rising price will be that a higher amount of working capital will be needed. In the case of companies, however, which can raise their prices proportionately, there will be no serious problem regarding working capital. Moreover, the price rise does not have a uniform effect on all commodities. It is likely that some firms may not be affected at all. In brief, the implications of changing price levels on working capital position

will vary from company to company depending on the nature of its operations, its standing in the market and other relevant considerations.

Operating Efficiency :

The operating efficiency of management is also an important determinant of the level of working capital. Management can contribute to a sound working capital position through operating efficiency. Although management cannot control the rise in prices, it can ensure the efficient utilization of existing resources, etc. Efficiency of operation accelerates the pace of the cash cycle and improves the working capital turnover. It releases the pressure on working capital by improving the internal generation of funds.

The preceeding discussion shows that the level of working capital is determined by a wide variety of factors which are partly internal to the firm and partly external (environmental) to it. Efficient working capital management requires efficient planning and a constant review of the needs for an appropriate working capital strategy.

Liquidity Vs. Profitability Risk Return Tangle:

The firm would make just enough investment in current assets, if it were possible to estimate

working capital needs exactly. Under perfect certainty, the current assets holdings would be at the minimum level. A larger investment in current assets under certainty would mean a low rate of return on investment for the firm, as excess investment for the firm, as excess investment in current access will not earn enough return. A smaller investment in current assets, on the other hand, would mean interrupted production and sales, because of frequent stock-outs and inability to pay to creditors in time due to restrictive policy.

As it is not possible to estimate working capital needs accurately, the firm must decide about the level of current assets to be carried. The current assets holding of the firm will depend upon its working capital policy. It may follow a conservative or an aggressive policy. These policies have different risk return implications. A conservative policy means lower return and risk, while an aggressive policy produces higher return and risk.

The two important aims of the working capital management are : profitability and solvency. Solvency, used in the technical sense, refers to the firm's

continuous ability to meet maturing obligations.

Tenders and creditors expect prompt settlements of their claims as and when due. To ensure solvency, the firm should be very liquid, which means larger current assets holdings. If the firm maintains a relatively large investment in current assets, it will have no difficulty in paying the claims of the creditors when they become due and will be able to fill all sales orders and ensure smooth production. Thus, a liquid firm has less risk of insolvency; that is, it will hardly experience a cash shortage or stock-outs. However, there is a cost associated with maintaining a sound liquidity position. A considerable amount of the firm's funds will be tied up in current assets, and to the extent this investment is idle, the firm's profitability will suffer.

To have higher profitability, the firm may sacrifice solvency and maintain a relatively low level of current assets. When the firm does so, its profitability will improve as less funds are tied up in idle current assets but its solvency would be threatened and would be exposed to greater risk of cash shortage and stock outs.

A going concern is always expected to set off the outflows of funds by their inflows. However,

the exact synchronisation of inflows and outflows throughout the year may not be possible due to seasonal variations and risk involved in a business. And, from this very point the functions of a financial manager short.

Heavy investment in cash, receivable and inventories puts the financial manager into safe side and less problems will be there regarding the liquidity positions. The obligations shall be met at or before they mature. Thus the short term creditors and managers may feel themselves comfortable with heavy blockade of funds in current assets. On the contrary, there are other groups of persons who expect constant and reasonable size of return on their investment. To meet their demands, the firm is supposed to make major investment in earning assets, i.e. fixed assets. From this view point, the management always tries to reduce its investment in current assets diverting the excess amount either to fixed assets or paid back to shareholders. However, minimising the size of current assets may create problems, like inability to meet obligations due, fear of stock-out and deterioration of sales due to tight credit policy consequently, the financial manager finds himself in a dilemma between risk and return.

Under the general assumption that current assets are less yielding to fixed assets and short term funds are less costly to long term funds, the financial manager may put the profitability of the firm in danger by maximising the investment in current assets, while the liquidity may be challenged if the minimises the investment in current assets. This is the risk- return trade-off for which the financial manager uses his best Judgement to optimise it.

Solvency is the indicator of the position where total assets exceed total liabilities and most of the going concerns occupy this position. This is the legal concept of solvency. Instead, the firm might not be in a position to pay off its obligations at their maturity even when it is legally solvent. If this situation occurs in the course of operation the firm is called technically insolvent and such position occurs due to insufficient time to liquidate the assets, the firm already has. "Technical insolvency occurs when a company has too high a proportion of its assets for removed from cash and is unable to proportion of its assets for removed from cash and is unable to generate cash when required, this is known as overtrading... the creditors become apprehensive and will demand

immediate payment of their debts. It is the situation where a firm has sufficient assets to meet all its financial obligations, but not enough time to convert those assets into cash.¹ However, the measurement of a firm's technical solvency constitutes the core of all forms of short term credit analysis.²

There also exists a trade-off between the benefits of liquidity and cost of maintaining it, insisting the firm to maintain optimum liquidity. Besides, a firm cannot avoid this risk either by putting excess amount in current be avoided, they cannot be shared, they must be assumed by someone who is both willing and able to do so."³ where no person or firm is ready to assume such risk, the want of such commodity or service will remain unfulfilled. Obviously, the return on such investment in the compensation not for bearing risk but for assuming it at one time in the past.⁴

1. Frank and Scholefield, Corporate Financial Management UK Grower Press, 1974, p.8

2. Walter, "Determination of Technical Solvency", O'Donnel & Goldbery (eds) Elements of Financial Administration, New Delhi, PHI. 1964. p.74

3. Howard and Upton, Introduction to Business Finance, NY, McGraw Hill Book Company Inc., 1953, p.20.

4. Ibid; p.21

In a going concern, neither the whole current liabilities are discharged at a time nor the whole current assets are available for this purpose. Nonetheless , the financial manager tries to synchronise the inflows and outflows of funds and put sufficient cash margin for any default thereof. VanHorne correctly states, "If the firm could both borrow and lend at the same interest rate, there would be no 'cost' to maintaining whatever level of liquidity was desired to reduce the probability of technical insolvency."¹

Assessment of Working Requirements :

"You got to have money to make money." This business adage is a simple recognition that most firms require a continuing commitment of funds in order to operate. Funds are required to make investments in "Fixed Assets" and in "Current Assets", where "Fixed Assets" are owned ordinarily because the business expects to use them for its operations and to earn profits. On the other hands, "Current Assets" are these which convert themselves into other forms in business operations.

For efficient management of working capital, it is necessary management of working capital, it is necessary to ensure that it has not been circulating

1. Van Horne, Fundamentals of Financial Management
op. cit. p. 327.

in excess nor it should be allowed to fall below a particular level of business operations. Hence, it is necessary, to keep a proper balance between these two extreaness. Efficient management of working capital may bring a profitable organisation into doldrums, the other hand, it can ensure success of a non-profit earning organisation.

Many a business have come to grief on account of inadequate working capital and many business units have suffered due to excessive provisions of working capital. Investments due to non-effective utilization yield low returns.

It is therefore, necessary to have a sound in them magnitude of working capital and optimum allocation of working capital fund into different constituents of current assets.

The requirement of working capital funds by a firm would be mainly determined by : (a) The level of output to be achieved during the period (b) The quantity of each type of input required to make and deliver one unit of output (c) the length of the operating cycle.¹ (d) Input storage policy (e) cost of each input (f) finished- goods inventory

1. Van Horne, J.C.,; Financial Management and Decision, IIIed; p. 401.

policy (g) Credit terms allowed and received (h)
Technological changes.

Though, these factors determine the requirements of working capital funds in relation to output i.e., the funds which weary with the level of output.

Those working capital funds what remains insensitive to the changes in the output levels (fixed part of working capital) depend upon periodical payments like salaries, wages, rent, insurance premiums and other fixed revenue expenses. Sum of the variable and fixed working capital requirements in the "Total" working capital requirements or "Gross" working capital requirements.

Besides, earlier mentioned factors the working capital of a firm is also influenced by its size and activities and its attitudes towards risk and return.

There is no unanimity regarding the impact of the size of working capital on risk and profitability. As some studies indicate that high level of working capital decrease "Risk" that a firm assumes and increase "Return". The concentration on profits rather than liquidity, overcomes the

extra cost of excessive working capital and result both in decrease in "Risk" increase in "Returns" However, in no case working capital should be excessive high.

There is another school of thought according to which lower the proportion of "Current Assets" to "Total Assets" and higher the ratio of short term debts to total debts there will be higher profit or return on total Investment.¹ Here, lower the ratio of current assets to total assets and higher the ratio of short term debts to total debt would result in low working capital even negative working capital.

The logic behind such proposition is that extra current assets cost money. If they are kept, the firm must pay for them which would lead to lower profit and return to shareholders on their investments.

Prof. Walker thinks , if the amount of working capital is varied relative to fixed capital, the amount risk that a firm assumes is also varied and the opportunity for gain or loss is increased.

1. Van Horne, J.C.; Financial Management and Decision, IIIed; p.401

Here the term risk refers to the risk of not maintaining adequate liquidity risk of having too much or too little inventory to maintain production and sales and the risk of not granting adequate credit to support proper level of sales.

He also accepts that working capital is employed only when actual production is undertaken. Therefore, if output is increased the need for working capital is also increased and vice-versa. The production determines generally the amount of working capital that a firm needs. The working capital also depends upon factors influencing amount of various current assets required to support given volume of output, management's philosophy concerning risk. The type of capital used to finance working capital directly affects the amount of risk that a firm assumes as well as the opportunity for gain as loss.¹

Walker E.W. has also developed further more principles² regarding working capital.

One of the principles may be briefly stated as of working capital is varied relative to sales

1. Also mentioned in Walker; E.W. "Essentials of Financial Management", p.64 and 65.

3. Walker, E.W., op. Cit., p.63.

the amount of risk that a firm assumes is also varied and the opportunity for gain or loss is increased. The capital should be invested in each component of working capital as long as the equity position of the firm increases.

Managing Working Capital :

The direct approach to working capital control is to develop effective policies for each of the components of working capital. Since deviations occur in actual operations, hence indirect control techniques are needed to reduce the working capital requirements. To have control over working capital, management should develop a cash budget at the beginning of each planning period. Actual operation should be compared periodically with the budgeted operations, if variance occur, the causes should be determined and corrected.

Management of "Receivable" and "Inventory" are more complicated than that of "Cash". The determination of the function of firms & policies.

It the turnover, as measures exceeds or falls below what is desirable, it is proved that the pre-decided policies are not being followed or are ineffective.

The effective management of working capital is the primary means of achieving the firm's goal of adequate liquidity. It is after all the current assets that will be available to meet the current obligations of the firm. It is the net working capital that helps to measure the degree of protection against problems that might cause a shortage of funds. Management of current assets involves two processes, viz., forecasting the needed funds and acquiring funds.

In brief, management of working capital requires number of actions regarding proper liquidity structure of the firm, maintaining proper size of current assets in relation to sales, cost of production, etc.

To evaluate management of working capital certain conventional rules of thumb are used.

After deciding the level of working capital at a particular firm, the management is concerned with the continuous flow of current assets from one form to another leaving a reasonable rate of return on the funds invested. Modern management claims the adage that 'profits are managed not automatic.' Therefore, "Current ratios, net working capital turnover, inventory and receivable turnover

days sales outstanding in working capital turnover, inventory and receivable turnover, days sales outstanding in working capital or components thereof, are all expressions of how well working capital was managed and are examples that can be included in a firm's operating reports."¹ Modern financial manager has to spend most of his time and skill in the management and monitoring of working capital, although the strategic long run decisions that he makes are extremely important.²

In spite of his many challenging and unavoidable functions , a financial manager has to devote most of his time to minimise the investment in current assets and to ensure that the firm has enough funds invested in current assets for its smooth functioning. Thus, the finance manager is always expected to play with risk and return trade off of a company. This is because, "the management of working capital is a continuing function which involves control of the everyday able and flow of financial resources circulating in the enterprise in one form or another³

1. R.E. Dogget, "Managing working capital," Management Accounting, N.Y. Dec., 1980, p.20

2. Brigham (ed.) Reading in Managerial Finance, Hinsdale Illinois, Dryden Press.1971, p.219.

3. Gole, Op. Cit., p.62.

The finance manager keeps continuous watch on the flow of funds and if there happens any adversity he reacts immediately to correct the situation. He plays with the risk of both over and under capitalisation which he cannot avoid but tries to manage intelligently.¹

The success of a business mostly depends upon the efficiency of its management in foreseeing and predicting future proceeding of firm. Thus, the accountability of each department should be fixed and the person responsible for any adversity is to be held liable for that. Working Capital management requires a working knowledge, awareness and understanding among the decision makers and such decision making cannot be limited to the specialist the controller or the treasurer. All the person's concerned might be made responsible.²

No uniformity is found regarding the size of working capital. It is the sum of the cost of stocks, investment in receivables and minimum

1. Mc Nair, as quoted in Harvard Business Review, Boston (Jan/Feb. 1955), p.42.

2. Dogget, op.cit., p.19.

cash balance mines the accounts payable and accrued liabilities at a point of time. A measure is provided by the ratio of working capital to current liabilities- a comparison of the wealth supplied by the current creditors with the current wealth supplied by the owners of long term creditors or both.¹ A famous reply of fincoln may be relevant regarding the size of working capital:

Question: "How long should a man's leg be?"

Answer: "Long enough to reach the ground!"²

Thus goes the size of working capital to suffice the need of a firm.

By means of skilled maangement some British companies could survive on a much smaller amount of working capital than was previously considered possible.³ However, the proportion of various working capital components in American firms have revealed that one sixth was held in the form of cash, one half in various receivables and one

1. J.N. Mogre, Financial Statement Analysis, N.J. Prentice Hall Inc. Englewood Cliffs, 1965, pp.255-256.

2. C.W. Gerstenburg, Financial Organisation and Management of Business, N.Y., Prentice Hall Inc., 1951, p.349.

3. Kirkman, Modern Credit Management, London,

third in inventory.¹

In the situation of rising prices, when more investment in stock is required, in dull market situations, when finished goods remain unsold, and in the situations of cut-throat competition; strikes and lockouts, and business expansion, the firm usually needs additional dose of money to be injected in it.

Along with other duties the financial manager must have a good relation with his banker having frequent interaction about the firms position and plans.

The control only over the assets side of the balance sheet may be sufficient for a skilled financial manager. Nonetheless, a high degree of vigilance over the various categories of assets and liabilities is necessary.

According to Albert Einstein, Theories are attempts at explaining the inner workings of a watch whose machanisms are not accessible

1. Schultzand Schultz, Basic Financial Management USA, Intext Educational Publishers, 1972, p.111.

to direct observation. Here also the theories of working capital management have been laid down which may vary in their applicability depending upon the individual circumstances of the firms. It is needed to study thoroughly all the factors both past and present human and physical, and then decide the adequate amount of working capital they need.¹

Measurement of Liquidity of the firm:

There are a number of methods to evaluate the firms availability to liquidate its maturing obligation. Most important of them is the relationship between current assets and current liabilities. They are:

- (a) Current ratio is computed by dividing current assets by current liabilities which should preferably be 2:1
- (b) Quick ratio or Acid test ratio is computed by dividing current assets excepting inventory by current liability i.e. current assets- Inventory current liabilities.

This ratio should be maintained at 1:1
An important drawback of using these ratio to measures solvency is that the concept

1. C.A. Dauten, "The Necessary Ingredients of a Theory of Business Finance", Journal of Finance, Ny, May 1955, p.,108.

of "Going concern" is ignored. If all the current assets were liquidated in order to meet the firm's obligations, the firm would not have working capital to carry on its operations, for all practical purposes, firm would become insolvent.

If a firm employs its "Working capital in an efficient way, solvency is guaranteed. Solvency normally rests with efficient use of components of current assets. The amount of working capital for any given volume of sales is determined by the rate at which these assets move through the various process. If the turnover is smooth and rapid, the amount of working capital for any given volume of sales is determined by the rate which these assets move through the various processes. If the turnover is smooth and rapid, the amount of working capital required for any given volume of sales is less than when the turnover is slow or irregular. The method used to measure the effectiveness of total working capital is to divide sales by total working capital.¹

1. Walter , E.W., Essentials of Financial Management, p. 34.

CHAPTER - IV

MANAGEMENT OF
WORKING CAPITAL
AT IFFCO

CHAPTER - 4

MANAGEMENT OF WORKING CAPITAL AT IFFCO

Problems of working capital are complex, the reason being that the working capital is required by all industries irrespective of whether they are engaged in manufacturing or service industries. It is possible that the problems may be pronounced in the case of manufacturing industries than in others, but the impact of the basic problems continues to remain there in varying degrees. In many situations organisations find it relatively easy to raise fixed capital requirements as compared to working capital requirements. This is so because the frequency of having to face problems of working capital requirements as compared to working capital requirements is more than what it may be in fixed capital requirements, where decisions have to be taken sparingly with a reasonable time margin.

A complex area of business finance is working capital management. Management of working capital has two dimensions - short term uses of funds and short term sources of funds. Working capital management itself is a first stage sub-problem in the total financial dilemma and short term financing is a second stage sub-problem within the working capital management.

As it has been mentioned 'working capital' has been used to denote the surplus of current assets over current liabilities. Thus, the term 'working capital financing' may be used to denote the arrangement of funds equal to the amount of working capital. However, in practice, this aspect is used to manage the funds necessary to finance all the current assets. The main sources of working capital are spontaneous financing (or trade credit), short term financing and long term financing.

The size of spontaneous financing used by a firm depends upon its relationship with other parties (mostly the suppliers), its growth rate and market situations. Such money is borrowed from the suppliers (later know as trade creditors) by delaying the payment dates for their goods or services, with or without their consent. The recipient firm has to take decision about the length of this source of financing either by delaying the payment or by enjoying cash discount through early payment. Commonly, these sources are cost free and automatic for a period previously understood in the market. But, interest may be charged by the creditor for the overdue period, if the agreed period is not followed. Generalaly,

a firm would like to finance its current assets with spontaneous sources as much as possible. Thus, the real choice of current assets financing lies between short and long term sources only, which may be grouped as internal and external sources, or financing by stockholders and creditors.

Short term debts are extended by the banks and other lending bodies. Maximum benefits may be of much help on times of financial stress. Instead this source is to be used with caution because, "lending agencies are more concerned with the protection of their investments than in the furnishing of adequate funds to make the firm the most profitable in case everything works out as planned."¹

Collection of share capital, debentures, preference shares, long term debts and retained earning are the sources of long term financing. If all the current assets are financed by long term sources, the entire working capital of the firm would be represented by net quick assets, and there would be no difference between gross

1. Osborn, Business Finance - The Management Approach, New York, Appleton - Century - Crofts, 1965, p. 108.

and net amount of working capital. This position will be unprofitable due to high cost of long term financing. However, in a successful firm, it is usual to obtain the successive increments of working capital by perpetual reinvestment of earnings.¹ Later, it will pay more by way of dividend and hence, the stock of such firm will be sold easily at high prices. "It is a rule of finance that as the value of business for a given concern increases the amount of working capital must be increased in order that the current liabilities may be provided with a proper margin of safety."² Thus, in some occasions, the financing of working capital might be a safety measure to protect the interest of short term lenders.

A business concern obtain its finance from the capital market. The savings of all the economic units are put into the reservoir of social resources and the needy business concerns are allowed out of that, only for the duration they actually need. The function

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1. Encyclopaedia of Social Sciences, Op. Cit., p. 427.
 2. Guthman, Analysis of Financial Statements, N.J., Prentice Hall Inc., Englewood Cliffs, 1960, p. 70.

of this reservoir has been conducted by the banks and the financial institutions who collect from the surplus units and distribute to the needy units." If savings equalled investment in real assets for all economic units in an economy, over all periods of time, there would be no external financing no financial assets and no money and capital market."¹ However, this does not happen in the real life situation of an economy and, thus, the funds are to be managed by each economic unit. The term 'finance' has been defined as that administrative area or set of administrative functions in an organisation which have to do with the management of the flow of cash so that the organisation will have the means to carry out its objectives as satisfactorily as possible and at the same time meet its obligations as they become due.² Consequently, adequate working capital has become the first requirement for preserving good trade and bank relations and for meeting all the expenses and liabilities at maturity. Most of firms in under developed economy are

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1. Van Horne, Fundamentals of Financial Management, New Delhi, PHI, 1978, p. 24.
 2. Howard and Upton, Introduction to Business Finance, N.Y., McGraw Hill Book Company Inc. 1953, pp. 3-4.

troubled with paucity rather than excess of working finance. Thus, 'it is disconcerting to be engaged in a line of business about which the market says, in effect, that its scarp value is higher than its value as a going concern.'¹ On the other hand, the adequacy of working finance must not be taken to mean the blockage of heavy idle money in the firm. "In today's competitive economy where products become obsolete very quickly, it is a great advantage to have a high level of readily available working capital."² The ability of borrower to switch channels from one credit source to another and the difficulty of determining borrower purpose on the basis of the particular channel or borrowing instrument employed make control of use for more uncertain than control of 'channel' and 'instrument.'³

SHORT-TERM FINANCING

"Short term financing is identified with decision making rather than with any specific calendar time. Financing decision that affect current operations without changing gross or net capital are short term."⁴

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1. Chapman, "The Banker's Dilemma," HBR Boston, July/August, 1953, p. 51.
 2. Parkinson and Rustomji, Realities in Management, Bombay, IBH Publishing Company, 1981, p. 105.
 3. Hedgman as quoted by Rao and Kaminow, "Selective Credit Control and The Real Investment Risk", The Journal of Finance, NY, Dec 1973, p. 1103.
 4. Brandt, Business Finance : A Management Approach, N.J. Prentice Hall Inc.,

The category of funds covers the need of working capital for financing day-to-day business requirements. Normally, the duration of such requirements does not exceed beyond a year. The sources of short term working capital may be internal as well as external.

(a) INTERNAL SOURCES

1. **Depreciation Funds** - The depreciation funds constitute important source of working capital. Some authors of business finance do not accept them as a source of funds but it is not reasonable.

2. **Provision for Taxation** - The provisions for taxation can also be used by the companies as a source of working capital during the inter-mittant period.

3. **Accrued Expenses** - The firm can postpone the payment of expenses for short periods. Hence these accrued expenses also constitute an important source of working capital.

(b) EXTERNAL SOURCES

1. **Trade Credit** - One of the most important forms of short term finance is the trade credit extended by one business concern to another on the purchases and sale of goods and equipment.

The use of trade credit has increased in recent years due mainly perhaps use of trade squeeze. The trade credit may also assume three forms: purchase on open account purchasing on furnishing a promote for specified period and purchase on trade acceptance, (i.e. bills payable).

2. **Bank Credit** - Commercial banks are also principal sources of working capital. They provide working capital in a number of ways such as overdrafts, cash credit, line of credit short term loans etc. Compared with other methods of borrowing this is the most flexible source because when the debt is no longer required it can be quickly and early reduced. It is also comparatively cheap.

3. **Credit Paper** - In the category of credit papers, bills of exchange and promissory notes of shorter duration varying between a month and six month are used. These papers are discounted with a bank and capital can be arranged. Accommodation bills is an important method of such finance.

4. **Public Deposit** - Public deposits are also an important source short term and medium term finance. Due to shortage of bank credit in recent past, the importance of public deposits has increased. They have been very popular among Indian Companies during last years.

5. **Customer's Credit** - Advances may also be obtained on contracts entered into by the enterprise. The customers are often asked to make some advance payment in cash in lieu of a contract to purchase. Such advance can be utilised in purchasing raw material paying wages and soon.

6. **Government Assistance** - Sometimes, Central and State Governments also provide short term finance on easy terms.

7. **Loans from Directors etc** - A business concern can also obtain loans from its officers, directors, managing directors etc. These loans are often obtained at almost negligible rates of interest. Sometimes no interest is charged on them. Loans can also be obtained from other fellow companies working within the same group.

8. **Security of Employees** - If employees are required to make deposits with their employer companies such companies can utilise those amounts in meeting their working capital needs.

9. **Factoring** - Factoring involves raising funds on the security of the company's debts, so that cash is received earlier than of the company waited of the debtors to pay. Thus the factors help in improving the company's liquidity

position. But this finance is not cheap in comparison to bank credit etc.

10. **New Money Market Instruments** - Most recently new instruments have been introduced in the Indian market like 182 treasury bills inter bank participations, commercial paper, certificates of deposits etc, to impart a degree of flexibility in the money market and to integrate the different segments of the money market more closely.

Discount and Finance House of India (DFHI) continued its efforts towards developing an active secondary market for money market instruments and integrating various segments of market. For the first time during the current financial year DFHI was entrusted with an additional role of government securities. The present position of major money market instruments dealt with in the India money market are as under :

(A) **Call and Notice Money**

In this market funds are borrowed and lent for one day (call) and for a period upto 14 days (notice) with out any collateral security. From May 1, 1989, the interest rates in the call and notice money market are market determined.

Interest rates in this market are highly sensitive to the demand supply factors.

(B) Inter Bank Term Money

This is a market exclusively for banks commercial and cooperative banks. In this market banks borrow and lend fund for a period over 14 days and generally upto 90 days without any collateral security at market determined rates. Deposit receipts are exchanged. As per IBA ground rules lenderes cannot prematurely recall these funds. Hence, this instrument is not liquid.

(C) Treasury Bills

Treasury bills are short term promissory notes issued by Government of India at a discount generally for a period between 91 days and 364 days. Presently 91 day. Treasury bills are issued by the Reserve Bank of India on top basis at a fixed discount rate of 4.60 percent per annum. 91 days Treasury Bills are rediscounted by the Reserve Bank of India but additional early rediscounting fees" are divided rediscounting of these bills with in 14 days from the date of purchase. In view of these rigidities this instrument has ceased to be of relevance to the money market. The 182 days treasury bills was

the first security sold by auction for financing the ciral deposit of Central Government.

(D) Commercial Bills

Bills of exchange are drawn by the seller (drawer) on the buyer (drawee) for the value of goods delivered to him. Such bills are called commercial bills.

The eligibility criteria prescribed by the Reserve Bank of India for rediscounting commercial bills interalia are that the bill should arise out of genuine commercial or trade transaction evidencing sale of goods and the maturity date of the bill should not be more than 90 days from the date of rediscounting.

(E) Certificate of Deposits

Certificates of deposits (CDs) are negotiable term deposit accepted by commercial banks from bulk depositors at market related rates. In June 1989, the Reserve Bank of India issued guidelines for issue of CDs. CDs can be issued by scheduled commercial banks (excluding regional rural banks) at discount to face value for period from 3 months upto one year. CDs issued

over the pre May 2, 1992 limit equivalent to 5 percents of the for nightly average out standing aggregate deposits in 1989-90 are not to be considered as part of banks not DTL for the purpose of cash Reserve Ratio CDs are subject to stamp duty.

(F) Commercial Paper

Commercial papers are unsecured promissory notes as issued by well rated corporate entities to raise short term working capital requirements directly from the market instead of borrowing from banks. According to the guidelines issued by the Reserve Bank of India in January 1990, and relaxations there from time to time. Companies issuing CDs must meet following major requirements.

- (i) The working capital (fund based) limit of the company should not be less than Rs. 5 crore and net worth of the company should not be less than Rs. 5 crore.
- (ii) The CD can be issued for a period of 3 months to 6 months the issue should be a minimum amount of Rs. 25 lakhs and multiples there of.

- (iii) A company can issue CPs upto 75 percent of its working capital (fund based) limit and after issue of the CPs, company's working capital limit with the bank is correspondingly reduced.
- (iv) Credit rating awarded to the issuing company by CRISIL (ICRA) should be P2/A6 or higher and the borrowed account of the company should be clarified under Health Code No. 1.

Total turnover of DFHI in the call money market in 1991-92 expanded by 47 percent over 1990-91 level to reach a figure of Rs. 2,97,000 crore (a daily average of Rs. 54.6 crore). In the current financial year upto December 11, 1992 its total lending in the call money stood at Rs. 3,28,000 crore in the period of 1991. There has, however, been a significant decline in the period of 1991. There has, however, been a significant decline in the turnover of DFHI in commercial bills, commercial papers (CP) and certificates of deposits (CD) upto 27 November, 1992, there was a small turnover of Rs. 28 crore in CPs and very negligible turnover in CDs.

11. Development of Mutual Funds and other
Institutions

Until recently, there was no mutual fund except Unit Trust of India established in 1964. During the year 1991-92 (July-June), commercial banks continued to diversify their activities in related to activities like merchant banking equipment leasing, venture capital, mutual funds, factoring and housing finance etc. through their subside or on their own. As at the end of June 1992, there were nine equipment leasing cum merchant banking subsidiaries set up by banks, with the prior approval of the Reserve Bank. These included eight subsidiaries of public sector banks viz: State Bank of India, Canara Bank, Punjab National Bank, Central Bank of India, Bank of India, Indian Bank, Andhra Bank, Allahabad Bank and one of a private sector Bank viz: Vijaya Bank Ltd. in associated with another private sector Bank viz. Karur Vysya Bank Ltd.

During the year, the bank mutual funds floated 10 new schemes three by IBI mutual funds, two each be PNB Mutual Fund, BOI Mutual Fund, Can Bank Mutual Fund and by Indbank Mutual Fund. As at the end of June 1992, five public sector banks and one private sector bank had set up

subsidiaries exclusively for providing housing finance. Venture capital fund has also come into existence to provide funds to green field projects. Banks, their subsidiaries and UTI have also started offshore mutual funds and these have attracted wide notice and support in the international field and garnered sizeable amounts providing the much needed foreign exchange support to the economy.

12. Factoring

Following the recommendations of the Kalyan Sundaram Committee, factoring is an other area where the Indian Commercial and development banks have ventured to take up. A 'factor' takes over the responsibility of collection of receivables of its clients, thereby freeing them from the baseless of collecting receivables and enabling them to concentrate more on product development, marketing strategy, etc. In India, almost 80% of transactions are under open account system, without the discipline of 'bill culture'. Payments are usually inordinately delayed, resulting in very high cost of finance to suppliers, specially small and medium sized unit, some times crippling the unit beyond repair. In such a scenario,

factoring will be a boon to small and medium scale units.

(ii) ISSUE OF CREDIT CARDS

Further, many banks have introduced credit cards, travellers cheques etc. as also schemes for consumer credit under various names. These various developments are going to make a qualitative difference to banking in the nineties. However, in a dynamic and diversifying economy, many more innovations are likely to be ushered in, in keeping with changing needs of the various sectors of the economy.

Commercial banking the world over, is under...going a rapid transformation through the process of de-regulation, liberalisation, competition internationalisation of banking and financial services introduction of modern technology and use of sophisticated, communication in business operations. The international capital market is also fast expanding with the development of new financial products and the sophisticated techniques operating in the capital markets.

The Indian banking system cannot remain isolated from the development and trends in the financial system in the international area. In

India also the process of de-regulation and liberalisation has come to be initiated, but of course, with certain degree of caution, in the face of implementation.

A growing economy needs the support of a financial structure which is responsive to the needs of development. In India, in the process of financial depending, commercial banks had to shoulder special responsibilities for meeting the financial needs of development. The innovations of commercial banks indicate their adaptive skills and the vital role they have been playing in the process of development, spanning, rural and urbans, agricultural and non agricultural and organised and unorganised sector of the economy - each sector needing different approaches, skills and techniques. All these speak about the real achievements of the commercial banks in India in the recent past and a bright introspects, in the near future.

LONG TERM FINANCING

As stated earlier, a part of the current assets are of permanent nature which do not decline below a minimum level in a going concern. Hence, it may be logical to finance that minimum level

of current assets by the long term sources of finance. In the open market this need may be fulfilled through long term borrowing from banks, issue of debentures, or preference stock and issue of equity share capital. Thus, main choice lies on either debt financing or equity financing.

"Capital structure is meant the total composition of the long term methods of financing, including long term debt and all forms of ownership claims, such as stock and surplus. By dividing each component value by the total the capital structure proportion may be ascertained."¹ The capital structure of a firm has its direct reflection on profitability. It is the proportion between debt and equity and also termed as financial average. The change in debt equity ratio once ascertained will change the profitability ratio disproportionately. "The real profitability of business concern has been hidden when they are subject to an excessive burden of debt, for interest on loans is a prior change, while the dividend is not. The same amount of profit would show totally different rates in conditions of varying

1. Howard and Upton, Op. Cit., p. 141.

debt equity relationships.¹ The use of long term funds for working capital has also its severe limitations and must be considered with proper cushion. Thus it has been stated that 'there was a switch in emphasis from the question of long term financing to working capital financing and working capital management.'²

Financing of operation in a firm through external sources is itself an indicator of lack of exact synchronisation between inflows and outflows of cash from the firm's operation during a time span. Thus, the duration of funds borrowed from outside is matched with the duration of their need in the firm and the longer the maturity schedule of a firm's debt in relation to its expected net cash flows, the less the risk.³ Because, the synchronisation is still difference to manage in uncertain situations.

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1. Chattopadhyay, "Survey of Research on Financial Management", Public Enterprises in India, Sankar, Mishra & Ravi Shanker (ed), Bombay, Himalaya Publishing House, 1983, p. 183.
 2. Solomon, "Recent Trends ... Financial Management" in Aby & Vaughn edited Financial Management Classics, California, Goodyear Publishing Company Inc., 1979, p. 4.
 3. Van Morne, Op. Cit., p. 170.

The loan financing has its cost. The firm has to consider the cost and benefit of any debt before going into actual agreement for it. Theoretically, the longer the duration of debt the higher will be the rate of interest to be paid and vice versa. "Loans carrying a rate of interest have certain advantages in so far as they compel the public corporation to recognise that capital is a scarce commodity which have a price and therefore is not to be wasted. Furthermore, the interest payments and repayment can become a source of revenue to the government which the latter can use for purpose of further economic development.¹ A business firm; really speaking, makes no expenditures, it only makes investment.² As a matter of fact, such investments will be more profitable if they are financed through the internal generation of funds. It may include retained earning, depreciation charged, taxes deferred for payment, provisions made for any future expected payment and so on. For the re-investment purpose these funds are 'easy money' and have lesser pressure for the refund and deserve adequate liquidity in the firm.

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1. Hanson, Op. Cit., p. 131.
 2. S.P. Singh Capital Expenditure Decisions, Allahabad, India, Wisdom Publications, 1981, p. 5.

CAPITAL FINANCING OF IFFCO

The factors, which help to produce a large volume of output, are known as real capital. The real capital includes two major categories :

1. Fixed capital consists of factories, ware houses, offices, shops, buildings etc, used in industry, trade, plant and machinery, equipment, means of transport and cost and communication.
2. Working capital or circulatory capital includes raw materials, fuel, goods in process of manufacturer, stock held by producers or traders etc.

The amount, which a community adds to its capital during a period, is known as the amount of its investment or capital formation

during that period. Here the researcher has tried to give a clear picture of IFFCO's capital and finance growth during the past-years. The society is continuously increasing area of production as well as area of distribution. These efforts are not sufficient and need more investment of capital.

In September 1967, that the cabinet approved the proposal for issue of a letter of Intent to the Corporative Fertilizer Project and the participation of the Government of India in the rupee financing subject to satisfactory arrangements made with the USAID for the foreign exchange components. As per the accepted pattern of government participation in the share capital of cooperative ventures, it was decided that the Government would subscribe Rs. 18 crores against the cooperative share of Rs. 9 crores. Balance requirement of funds was to be met through loan by Government of India (approximately Rs. 24 crores) and by a consortium of leading institutions namely: Industrial Development Bank of India, Industrial Finance Corporation of India, Life Insurance Corporation of India and Unit Trust of India (approximately Rs. 26 crores).

The American Cooperatives on the other hand formed a non-profit organisation namely Cooperative Fertilizer International (CFI) and agreed to provide one million dollars besides technical know-how to the project.

The problem started when it was known in November-December, 1967 that USAID would not be able to find the necessary funds for this projects in view of the cuts imposed in AID appropriations. Therefore, a fresh source of mobilising finance for the project through funds from the US Banks under the guarantee of USAID was explored with the bank of America as the lead Bank. As per the conditions stipulated by the Bank of America, the chemical construction corporation was commissioned in May, 1968 to make an independent appraisal of viability of project. Simultaneously, a study of the market for the fertilizers to be produced by IFFCO was undertaken by a study team constituted by USAID (India) to check if the project merited the guarantee to be extended by the organisation. The definitive engineering study by chemical construction corporation completed in September, 1968 established the economic feasibility of the project and estimated the total investment

cost of the plant at 07 million.

When every thing was ripe, another stumbling block developed. Originally, the bank of America was to charge an interest rate of 6½ to 8 percent on the entire loan in addition to various financing and guarantee charges. This rate was favourably viewed by the Ministry of Finance. But at the time of finalisation of the loan agreement, the Bank of America indicated that interest rate had gone up to 8½ to 8½ percent on the loan covered by the extended risks guarantee and 8½ percent on the specific risk guarantee. This meant an overall rate of interest nearly 0½ percent, if the financing charges were also taken into account while these rates were under consideration the prime rate of lending in the United States went upto 8½ percent from the middle of June, 1969 which raised the overall rate to nearly 10.5 percent. The viability of the project was adversely affected by this development. Again IFFCO had to explore alternative source of financing. But finally with spontaneous support extended by the Government of India, USAID were persuaded to meet part of the foreign exchange were tied up through Government to

Government loan from UK to Dutch. The final picture of financing the project emerged as under :-

Share Capital	Rs. in Crores

Corporatives	9.00
Govt. of India	18.00
Loan:	
(i) Foreign Exchange	15.45
(ii) Allocation from Govt. to Govt. Credit	11.92
a) UK £ 7 Million	
b) Dutch DFL 3070500	
Rupee Loans:	
i) Govt of India	11.23
ii) I D B I	11.00
iii) L.I.C.	10.00
iv) I.F.C.I.	3.00
v) U.T.I.	2.00
	Rs. <u>91.60</u>

The Government of India provided unconditional guarantee to USAID in lieu Government of India would hold a mortgage on all assets of IFFCO. It was also contemplated that Government equity will be redeemed over a number of years after start up of the plants. After the consulting the cooperative leadership in various states, the state apex federations decided to have share holding of Rs. 2.5 crore in Punjab and U.P. each, Rs. 1 crore in Gujrat and Rs. 0.75 lakhs in Haryana and other six states viz. Rajasthan, M.P., Maharashtra, Tamil Nadu, Mysore (Karnataka) and Andhra Pradesh Rs. 50.00 lakhs each.

The beginning was made by the Govt. of India, Department of Cooperation, who released their first instalment of Rs. 25 lakhs in August, 1968. It was also contemplated that the States Contributing Rs. 50.00 lakh or more will have a seat on the Board of Directors of IFFCO. As a founding principle it was also decided that the products of IFFCO will be shared among the participating states in proportion to their total share holding by the cooperatives from a states. The ten

participating State cooperative federations will get their share in this manner.

The farmers of IFFCO's constitution and its bye-laws deserve all praise for visualising and foreseeing some of the basic requirements of large scale industry at that stage and made adequate provisions for diversification of the membership from village to national level without which it would not have been possible to get the share of equity subscribed within the stipulated time. The membership was open to agricultural credit societies, marketing societies, processing societies and their federations at district, State and national level. The authorised share capital of IFFCO was kept at Rs. 100 crores which has since been enhanced to Rs. 1000 crores. Three type of shares were denominated for different tiers of cooperative societies viz Rs. one lakh for state federations, Rs. 10,000 per district level primary societies and Rs. 1000 for village level societies. The societies could become member of IFFCO, by paying 25 percent of the share value along with admission fee, the balance to be paid in three instalments. This was done with the

intention of facilitating the participation of even the smallest village societies with limited resources and also to mobilise the resources from largest number of cooperative societies.

The foreign exchange lenders viz. USAID had insisted on full subscription of cooperative equity before the signing of loan agreement. Similarly, Government of India equity Rs. 18 crores was to be paid in full before drawal of the USAID loan.

It was in this backdrop that share capital collection drive was started with right earnest and conviction. It was decided to accomplish this task by June 30th, 1970. This was no easy job. It was enormous and challenging as it involved not only working with ten states but more than 25,000 societies mostly at the village level spread in these states. The services of some dynamic officers of Joint Registrars level from the State Registrar's Office were requisitioned so that they could extend their personal influence on the cooperative societies for purchase of IFFCO shares.

Still there was no smooth sailing. Despite at the grassroot level, adequate funds were not forthcoming. The field staff recruited for promotion and marketing of IFFCO products under seeding programme were given targets for collection of share capital as an additional job. Meanwhile, there appeared a two column news item "Cooperative Fertilizers Projects in Doldrums" in Times of India. Economic Times of 30th June, 1969 carried on item "Cooperative Fertilizer Project runs into Difficulties". It further said "the Rs. 90 crores Indian Farmers Fertilizer Cooperative Project - the biggest venture so far undertaken in the cooperative sector in the country has run into difficulties. Member cooperative from ten states were expected to contribute only Rs. 9 crores towards the share capital of the project to be set up in Gujarat. But actual contribution so far total about Rs. 1.00 crore."

Discouraging prophecies were made by a few perimist cooperators whether the Indian cooperative system with the kind of experience limited to sugar mills and rice mills and with a weak financial base will be able to muster equal funds and technical expertise to implement

this capital intensive sophisticated mega fertilizer complex.

The whole energy of the organisation was harnessed for collection of share capital. Field staff and officers were required to make more frequent calls for canvassing and persuading village cooperatives for collection of meagre sum of Rs. 250 as the first instalment of share capital. At this hour, the capability and credibility of India cooperatives were at stake. Skelton staff at Head Office had to burn midnight oil to carry on the voluminous correspondence involved for follow up and scanning large number of application received from cooperative societies in various states.

Till the target get i.e. June 30, 1970, IFFCO could reach a figure of Rs. 2.88 crore (subscribed). However with the stepping up of this tempo the subscribed figure reached Rs. 8.06 crore by June 1971. But still we were short of our obligation. The Govt. of India came to our rescue with a special centre scheme. Under this scheme the Govt of India provided Rs. 67.85 lakhs to the National Cooperative

Development Corporation for giving 15 years loan to State Government who in turn passed it on to state apex marketing federations as loan/share capital with this amount of Rs.67.85 lakhs, the apex federations subscribed a share capital of Rs. 270 lakhs, making total figure of Rs. 10.26 crores subscribed. Thus the requirement of having the entire amount subscribed was honourably met.

But the problems was not yet over. The IDBI, the prime rupee lender had put a condition that IFFCO could not draw loan unless the subscribed amount by the cooperatives was fully paid up. Subsequent calls were issued and field staff had to be on their share by 1973 IFFCO had enrolled 24000 members. Thus so far the largest mobilisation of cooperative share capital in the country was accomplished in record time. This was the finest example of meticulous planning and execution, team effort, dedication, commitment and sense of belonging to the organisation displayed by members of IFFCO family from every corner. Probably, it is that work culture which has taken IFFCO to hights in subsequent years.

IFFCO contributed Rs. 97 crore as equity in KRIBHCO, a sister Cooperative Fertilizer venture, which produce 15 lakh tonnes of urea every year. It has also contributed Rs. 8 crore as equity as Godavari Fertilizers and Chemicals Limited (Joint sector enterprise of A.P. Govt.) a DAP manufacturing unit located in Andhra Pradesh.

IFFCO, alongwith the Govt of India and SPIC entered into long term agreement with Industrial Chimique Du Senegal ICS for supply of Phosphoric Acid and set up plant of Senegal. IFFCO has contributed Rs. 6 crore to help improve the performance to the same.

It is a matter of pride and satisfaction that in a capital intensive industry, like fertilizers, the society has been successful in working consistently with profit since it's going into production. As a result of successful performance and continuous, stable and increasing profitability during the proceeding years, the society has been able to further consolidate its financial position and enabled it to venture upon its expansion and diversification of plants with more confidence and self reliance.

TABLE - 4:1

CURRENT ASSETS OF IFFCO (Phulpur Unit)

	1996-97	1995-96	1994-95	1993-94	1992-93	1991-92	1990-91	1989-90	1987-89	1986-88	(Rs. in Lakhs)
<u>Loans and Advances</u>											
Cash and Bank Balance	1848	43382	9186	10608	11288	4462	1472	5709	5250	3411	
Sundry Debtors	3862	9435	5032	1141	97	3902	6245	4306	4485	874	
Inventories	7423	17385	10959	1904	4447	4860	4631	3104	2304	4320	
Loans and Advances	19414	16723	20516	6395	10116	15669	6684	8689	15044	4314	
TOTAL	28851	33285	35629	20048	5522	19969	2720	4430	3005	13007	

Sources - Complied from various Annual Reports of relevant years of IFFCO

After the analysis of the table no. 4.1 it is quite clear that the current assets of IFFCO Phulpur Unit has been increased from Rs.13007 Lakh 1986-87 to Rs.28751 Lakhs in 1996-97. The highest amount of current Assets is Rs.35629 in 1994-95 and lowest are Rs.3005 in 87-89. But decrease amount of Rs.2720 in 1990-91.

The closing stock of finished goods is net of adjustment of Transit and Standardisation losses of 6,715 MTs (Previous year 5899 MTs).

Due to the change in Accounting Policy , the stock in process at the year end has been valued and accordingly the profit for the year is higher by Rs.105.52 lakhs. Balance in respect of some of the contractors/ vendors and consumers/ suppliers are subject to confirmation/ reconciliation and consequential adjustments, if any. The society is implementing Farm Forestry/ IFFDC project on behalf of IFFDC. The total expenditure incurred till 31st March, 1997 is Rs. 1234.21 lakhs (previous year Rs.782.79 lakhs), out of which an amount of Rs.304.42 lakhs (previous year Rs.212.04 lakhs) has been met out of contribution by IFFCO, Rs.442.62 lakhs (previous year Rs.436.97 lakhs) has been met out of grant received from Government of India and other State Government and balance Rs-487.17

lakhs (previous year Rs.133.78 lakhs) out of contribution by India- Canada Environment Facility (ICEF) for IFFDC Project.

The contribution of IFFCO which has been shown under loans & Advances shall be adjusted on handing over the project to IFFDC.

Unutilised grant from Government of India and State Governments Rs.10.02 lakhs (previous year Rs.15.68 lakhs) and unspent contribution by ICEF Rs. 146.30 lakhs (Previous year Rs.225.22 lakhs) has been shown under the head "Other Liabilities."

Advances and other amounts recoverable in cash or in kind or for value to be received includes:

	As at 31st March 1997 (Rs. in lakhs)	As at 31st March 1998 (Rs. in lakhs)
Due from Employees	8286	7925
Prepaid Expenses	1561	944
Vendors/Contractors for capital works	566	1101
Other loans	1002	1031

Other deposits include payments against disputed liabilities towards :

- (a) Sales Tax - Rs.593.99 lakhs (previous year Rs.623.68 lakhs).
- (b) Excise Duty - Rs.16.00 lakhs (previous year Rs.16.00 lakhs).

Table 4.1 presents the details of current Assets of IFFCO (Phulpur Unit). We have includes the Loans and Advance, Bank Balances, Debtors- the year 1994-95 shows that in this year the amount of current Assets of IFFCO (Phulpur Unit) was highest with Rs.35629 (in lakhs), while the year 1986-87 show Rs.1300 lakhs which is lowest amount of current Assets of IFFCO.

TABLE - 4.2

CURRENT LIABILITIES OF IFFCO

(Rs. in Lakhs)

	1996-97	1995-96	1994-95	1993-94	1992-93	1991-92	1990-91	1989-90	1987-89	1986-88
<u>Current Liabilities & Provisions</u>										
Sundry Creditors	7190	8154	8512	6267	7909	10017	172	2145	8696	6577
Other current Liabilities	1960	1138	230	154	1246	1928	3288	890	390	1705
Provisions	27524	7388	13349	8704	3977	59	1273	1730	825	140
TOTAL	18374	372	22091	14817	5178	8148	2187	4765	7481	8422

Sources - Compiled from various Annual Reports of relevant years of IFFCO

After the analysis of the Table no. 4.2 it is quite clear that the total current liabilities of IFFCO Phulpur unit has been increased regularly from 1986-87 to 1996-97. Sundry creditors and other current liabilities has been also increased regularly, but it is less than the comparison of provision. It is better for any business concern.

Contingent Liabilities of IFFCO Plant :

- (1) Guarantees and letters of credit given by banks on behalf of the society and inforce as at 31st March, 1997 amounts to Rs.13,566.20 Lakhs (previous year Rs.34,645.00 lakhs)
- (2) Demand/ claim which are disputed and not provided for :

	As at 31st March, 1997 (Rs.in lakhs)	As at 31st March, 1996 (Rs.in lakhs)
Current & Assets	882	773
Arbitration	3147	2387
Others	539	408

- (3) The amount capitalised on account of Railway sidings and Quarters for Railway Staff is on the basis of the payments claimed/ bills received. Further, liabilities, if any, will be provided as and when the claims are received.

- (4) The compensation for the land acquired at Phulpur and Aonla has been paid as determined by the Government of Uttar Pradesh. Additional compensation, if any, payable to erstwhile land Owners will be accounted for on intimation from the State Government.
- (5) No provision has been made in the accounts for different in price as demanded by oil and Natural Gas Commission (ONGC) amounting to Rs.21,751.66 lakhs for gas supplied by ONGC to Kolol Unit from 1st April 82 to 29th Jan 87. Adjustment on amount of increase/Decrease in Gas price will be made in year the same are fixed by the Government of India and will be eligible for reimbursement under Retention price scheme.

Table 4.2 represents the table of current liabilities of IFFCO. The column current liabilities and provisions included the sundry creditors, other current liabilities and provisions. The year 1994-95 has highest amount of current liabilities with Rs.22091 in lakhs while lowest amount with Rs.5178 lakhs in 1992-93.

Current Ratio :

On the basis of current ratio, we can know the financial position of a concern current ratio is calculated with the help of formula as given below:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

If current ratio is two, it means that financial position is sound and it should not be high more than 2. If it is so it means that there is not proper utilisation of cash.

TABLE - 4.3CURRENT RATIO

(Rs. in Lakhs)

Year	Current Assets	Current Liabilities	Ratio
1986-87	74219	36932	2.01:1
1987-89	77224	29451	2.62:1
1989-90	81286	34218	2.38:1
1990-91	92793	36405	2.55:1
1991-92	113829	44552	2.55:1
1992-93	119371	39374	3.03:1
1993-94	139419	54191	2.57:1
1994-95	175048	76282	2.29:1
1995-96	146500	76016	1.93:1
1996-97	117,649	57642	2.04:1

After analysing the table no. 4.1 it is clear that current rate is ideal in 87-88, 89-90 , 90-91, 91-92, 93-94 and 94-95. But other financial year, it is not good. In 86-87 and 96-97 ratio is equal and 92-93 is it excess than normal.

QUICK RATIO :

To assess the liquidity of a business concern, we calculate current ratio and quick ratio. Quick ratio helps in revealing the liquidity position better than the current ratio, as it does not take into account the inventory which is not as liquid as other current etc. The standard formula for the calculation of the quick ratio is as follows:

$$\text{QUICK RATIO : } \frac{\text{CURRENT ASSETS - INVENTORY}}{\text{CURRENT LIABILITY}}$$

The general standard fixed for measuring the liquidity position of a concern is that the quick ratio should be equivalent to 1. If less than one, the liquidity position is not very sound. The following table depicts the quick ratio of Phulpur unit of IFFCO.

TABLE 4.4QUICK RATIO OF IFFCO

(Rs. in Lakhs)

Year	Current Assets	Inventory	Current Liabili- ties	Ratio
1986-87	74,219	4,320	36,932	1.82
1987-89	77,224	2,304	29,451	2.54
1989-90	81,286	3,104	34,218	2.28
1990-91	92,793	4,631	36,405	2.42
1991-92	1,13,829	4,860	44,552	2.44
1992-93	1,19,371	4,447	39,374	2.91
1993-94	1,39,419	1,904	54,191	2.53
1994-95	1,75,054	10,959	76,282	2.15
1995-96	1,46,500	17,385	76,016	1.69
1996-97	1,17,649	7,423	57,642	1.91

Source : Compiled from various Annual Reports
of Relevant Years of IFFCO.

(Data for the year 1986-87 is for the year July-June and data for the year 1987-89 is for the period July 1987 to March 1989 (21 months) and data for the year 1989-90 onwards is for April-March).

The analysis on quick ratio of IFFCO in table No. 4.4 it is clarifies that the current assets of IFFCO have been found increase from Rs. 74,219 lakhs in the year 1986-87 to Rs. 1,17,649 lakhs in the year 1996-97. The inventories have increased only from Rs. 4,320 lakhs in the year 1986-87 to Rs. 7,423 lakhs in the year 1996-97 with a sudden increase of the Rs. 17,385 lakhs in the year 1995-96. Thus, the pace of increase of inventories in IFFCO as not excess at par that of the current assets of IFFCO. The current liabilities have also in found to increase from Rs. 36,932 lakhs in the year 1986-87 to Rs. 57,642 lakhs in the year 1996-97 with a sudden increase of Rs. 76,282 lakhs in the year 1994-95. Thus, the increase in the current liabilities has also been found to be slow in comparision of current assets.

Accordingly the quick ratio of IFFCO has been found to be highest i.e. 2.91 in the year 1992-93. Against the lowest quick ratio of 1.69 in the year 1995-96. During the year 1986-87 the quick ratio was 1.82 only which has gradually increase upto 1994-95 being variances. But since 1995-96 it has against started increasing from 1.69 in the year 1995-96 to 1.91 in the year 1996-97.

TABLE - 4.5

DISTRIBUTION OF WORKING CAPITAL OF VARIOUS
UNITS OF IFFCO

(Rs. in Lakhs)

Year	Current Assets Loan and Advances	Current Lia- bilities and Provisions	Net working Capital
1986-87	74219	36932	37287
1987-89	77224	29451	47773
1989-90	81286	34218	47068
1990-91	92793	36405	56388
1991-92	113829	44552	69277
1992-93	119371	39374	79997
1993-94	139419	54191	85228
1994-95	175048	76282	98766
1995-96	146500	76016	70484
1996-97	117649	57642	60007

Source - Complied from various Annual Reports of Relevant years of IFFCO.)

(Data for the year 1986-87 is for the year July-June and data for the year 1987-89 is for the period July 87 to March 89 (21 Months) and data for the year 1989-90 onwards is for April-March.

Table 4.5 shows the comparative study of working capital of various units of IFFCO. We know that the Net working is the difference between current Assets including advances and current liabilities including provisions. In the year 1986-87 the Net working capital was Rs.37287 (in lakhs). The table 1.1 shows the highest Net working capital in the year 1994-95 which is Rs.98766 (in lakhs) and lowest in 1986-87 which is Rs.37287 lakhs. After the period of 1994-95 till 1996-97 the Net working capital is decreasing continuously.

After the analysis of the table no. 4.5 it is quite clear that the Net working capital has been increased from Rs.37287 lakh 1986-87 to Rs.60,007 in 1996-97. The highest working capital Rs. 98766 in 94-95 but current assets is Rs.175 048.

The comparative study the table, we find that the Net working capital and current assets always increased but increasing ratio approximately is equal 2:1 The Monetary Working Capital Adjustment has been made taking into account the liquid current Assets and Advances less current liabilities and provisions. The consequent erosion in the purchasing power of liquid assets in Rs.23.73 crore.

TABLE - 4.5

INCREASE/ (DECREASE) IN WORKING CAPITAL OF IFFCO

	1996-97	1995-96	1994-95	1993-94	1992-93	1991-92	1990-91	1989-90	1987-89	1986-87
									(Rs. in lakhs)	
Current Assets	28851	33285	35629	20048	5522	19969	2720	4430	3005	13007
Current Liabilities	18374	372	22091	14817	5178	8148	2187	4765	7481	8422
Increase/ (Decrease) in working capital	10477	33657	13538	5231	10700	11821	4907	335	10486	4585

Sources : compiled from the various report of relevant years of IFFCO.

After the analysis of the Table No.4.6 it is quite clear that the situation of working capital of IFFCO Plant. The working capital always increase from the session 1986-87 to 1996-97. The working capital needs of the firm may be fluctuating with changing business activities. This may cause excess on shortage of working capital frequently. The management should be too prompt to initiate an action and correct the imbalance. For this point of view the plant of IFFCO situation is very good.

Table 4.6 shows the situation of working capital of IFFCO. It reveals the increase or decrease in working capital of IFFCO. The working capital decreased in 1989-90, 1990-91, 1995-96; 1996-97 but it has decreased in the year 1986-87, 1987-88, 1991-92, 1992-93, 1993-94, 1994-95 significantly.

TABLE 4.7

INTERNAL SOURCES OF FUNDS OF IFFCO

	1986-87	1987-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	(Rs. in Lakhs)
Sources of Funds	15,048	2,820	330	180	256	173	260	82	240	444	
Share Capital											
Profit for Tax	1,018	2,060	5,591	10,811	10,091	11,577	12,388	21,161	13,282	16,641	
Depreciation	2,010	10,103	9,204	9,174	12,706	12,672	11,989	14,601	12,727	8,669	
Increase in Borrowing	20,640	24,248	3,702	1,298	1,438	3,183	1,106	-	19,124	85,329	
Net Decrease in Working Capital	-	-	335	4,907	-	-	-	-	33,657	10,477	
Others	-	76	-	-	-	-	-	-	-	-	
Total	38 716	39,343	19,162	26,370	24,491	27,605	25,223	35,844	78,550	1,21,560	

Sources : Compiled from various Annual Reports of Relevant Years of IFFCO.

The analysis worked out in table No. 4.7 indicates that the total funds from available from all the sources of IFFCO. Funds were Rs. 38,716 lakhs in the year 1986-87 which arose to Rs. 1,21,560 lakhs in the year 1996-97. In the middle the total funds had decreased upto Rs. 19,162 lakhs in the year 1989-90 which increased upto Rs. 26,317 lakhs during the year 1990-91. Thereafter it decreased to Rs. 24,491 lakhs during the year 1991-92 which increased to Rs. 27,605 lakhs in the year 1992-93, which again decreased to Rs. 25,223 lakhs in the year 1993-94. But thereafter the trend in the sources of total funds was increasing.

The share capital were Rs. 15,048 lakhs during the year 1986-87 and profit after tax Rs. 1,018 lakhs in the year 1986-87. But share capital had decreased upto Rs. 180 lakhs in the year 1990-91 and Rs. 82 lakhs in the year 1994-95, which increased upto Rs. 256 lakhs

in the year 1991-92 and highest in the year 1996-97. But profit after tax indicate the increasing position continuously from the year 1987-89 to 1994-95, except in the year 1991-92, but in compression the same 1995-96 to 1986-87, we found that profit after tax increased 'tremendously'.

The amount of depreciation in the year 1986-87 were Rs. 2,010 lakhs which had increased in the year 1987-89, 1991-92, 1994-95 in Rs. 10,103 lakhs, Rs. 12,706 lakhs and Rs. 14,601 lakhs. But it had decreased during the year 1989-90, 1990-91, 1992-93, 1993-94, 1995-96 and 1996-97 respectively. The amount of depreciation Rs. 9,204 lakhs, Rs. 9,174 lakhs, Rs. 12,672 lakhs, Rs. 11,989 lakhs, Rs. 12,727 lakhs and lowest amount of Rs. 8,669 lakhs in the year 1996-97.

The amount of depreciation show analysed indicated that it was lowest i.e. Rs. 8,669 lakhs during the year 1986-87 in comparision of the same during previous all the years except

1986-87 where it was only Rs. 2,010 lakhs.

The increase in borrowing indicates that it has increased from Rs. 20,640 lakhs, the year 1986-87 to Rs. 85,329 lakhs in the year 1996-97, in the middle period the trend of increase in borrowing quite zig-zag.

The net decrease in working capital indicate that it was increased from Rs. 335 lakhs in the year 1989-90 to Rs. 33,657 lakhs in the year 1995-96. In the year 1996-97 it was reported to be only Rs. 10,477 lakhs while in rest of the year, it was found to be quite nil. Other sources of funds of IFFCO only Rs.26 lakhs were reported in the year 1987-89.

TABLE 4.8EXTERNAL SOURCES OF FUNDS OF IFFCO

(Rs. in Lakhs)			
Year	Short Term Borrowings	Long Term Borrowings	Total Borrowings
1986-87	22,533	26,197	48,730
1987-89	20,409	47,403	67,812
1989-90	10,428	46,535	56,863
1990-91	6,494	45,394	51,888
1991-92	2,957	62,516	65,473
1992-93	810	59,506	60,316
1993-94	714	48,315	49,029
1994-95	701	46,486	47,187
1995-96	8,826	51,158	59,984
1996-97	22,632	1,15,083	1,37,715

Sources: Compiled from the various Annual Reports
of Relevant Years of IFFCO

The analysis worked out in table No. 4.8 it is indicates that the total external sources of funds of IFFCO (total borrowings) were reported to increase from Rs. 48,730 lakhs in the year 1986-87 to Rs. 1,37,715 lakhs in the year 1996-97. The increase during the middle year of the stipulated period of ten years was reported to be quite zig-zag.

The amount of short term borrowing reported to be increase from Rs. 22,533 lakhs has been in the year 1986-87 to only Rs. 22,632 lakhs in the year 1996-97. Thus, the increase in the short term borrowing in the external sources of fund quite meagre. In the middle years it was reported to be decreased continuously till the year upto 1994-95 were in amount was reported to be Rs. 701 lakhs which suddenly increase to Rs. 8,826 lakhs in the year 1995-96.

The amount of long term borrowing was found to be increase from Rs. 26,197 in the year 1986-87 to Rs. 1,15,083 lakhs in the year 1996-97. In the middle the increase in the amount of long term borrowing has been reported to be quite zig-zag.

TABLE 4.9SOURCES OF FUNDS OF IFFCO

(Rs. in Lakhs)			
Year	Internal Sources	External Sources	Capital Employed
1986-87	61,184	48,730	1,09,914
1987-89	64,562	67,812	1,32,374
1989-90	68,332	57,863	1,25,185
1990-91	77,080	51,888	1,88,977
1991-92	85,143	65,473	1,50,656
1992-93	94,645	60,316	1,94,960
1993-94	1,03,764	49,029	1,52,793
1994-95	1,21,894	47,187	1,69,081
1995-96	1,30,769	59,984	1,90,853
1996-97	1,43,073	1,37,715	2,80,792

Sources: Compiled from various Annual Reports of
Relevant Years of IFFCO.

The analysis worked out in table No. 4.9 indicates that the total capital employed of IFFCO. Amount available from external and internal sources were Rs. 1,09,914 lakhs in the year 1986-87, which increased to Rs. 2,80,792 lakhs in the year 1996-97. The sources of fund suddenly increased upto Rs. 1,88,977 lakhs in the year 1990-91, which decrease upto Rs. 1,50,656 lakhs in the year 1991-92. But there after the same were reported to increase upward continuously with a slight decrease during 1994-95 upto 1996-97.

The internal sources of funds of IFFCO were reported to increase from the year 1986-87 to 1996-97. The amount of Rs. 61,184 lakhs in the year 1986-87 upto Rs. 1,43,073 lakhs in the year 1996-97. The increase in the internal sources of funds was recorded to continuous though out during the stipulated period of ten years.

The external sources of funds of IFFCO were reported the increase from Rs. 48,730 lakhs in the year 1986-87 to Rs. 1,37,715 lakhs in the year 1996-97. In the year 1987-89 the total external sources of fund had increased upto Rs. 67,812 lakhs, which decreased slightly during the year 1989-90. But thereafter it increase upto Rs. 65,473 lakhs in the year 1991-92 and thereafter the same were decreased upto Rs. 47,187 lakhs in the year 1994-95, which suddenly increased upto Rs. 59,984 lakhs in the year 1995-96.

TABLE 4.10RETURN ON CAPITAL EMPLOYED RATIO OF IFFCO

(In Percentage)	
Year	Return on Capital Employed
1986-87	0.93
1987-89	1.56
1989-90	4.47
1990-91	8.38
1991-92	6.70
1992-93	10.03
1993-94	13.38
1994-95	20.93
1995-96	12.59
1996-97	7.16

Sources : Compiled from the various annual report
of relevant years of IFFCO.

The analysis worked out in table No. 4.10 indicates that the percentage the return on capital employed of IFFCO were 0.93 in the year of 1986-87 which increased to 7.16 percent in the year 1996-97. In the middle the percentage had increased in the year from 1987-89 and 1989-90. The percent of 1.56% in 1987-89 and 4.47% has in the year of 1989-90 after that the percent has decreased in the year 1991-92 but after that the percentage has increase upto 20.93% in the year of 1994-95. But percentage once decrease in the year of 1995-96 and 1996-97. The percentage was recorded during the year 1995-96 to 12.59 and 7.16 in the year 1996-97. The high percentage of return for capital employed will be better to comparision the low percentage of the year.

TABLE 4.11DEBT EQUITY RATIO OF IFFCO

(In Percentage)

Year	Debt-Equity Ratio
1986-87	0.80 : 1
1987-89	1.05 : 1
1989-90	0.83 : 1
1990-91	0.67 : 1
1991-92	0.77 : 1
1992-93	0.64 : 1
1993-94	0.47 : 1
1994-95	0.39 : 1
1995-96	0.46 : 1
1996-97	0.96 : 1

Sources: Compiled from the various Annual Report
of relevant years of IFFCO.

The analysis worked out in table No. 4.11 indicates that the ratio of the Debt Equity in percentages of IFFCO were 0.80:1 in the year 1986-87 which increase to 0.96:1 percent in the year 1996-97. Thus, it is quite clear that the debt equity ratio in percent of 1:1 has normal and other than situation is better or bad. The except in the year 1987-89 the ratio in the percentage during the year 1987-89 has been 105:1 debt equity ratio. The percentage of ratio the decreasing situation regularly in the year from 1990-91 to 1994-95 which has increased in the year 1990-91 upto 0.83:1 and 0.39:1 in the year 1994-95. But in the year 1995-96 and 1996-97. The ratio of debt equity has 0.46:1 and 0.96:1 respectively. Thus, we can say that the normally better position in last ten year to except of 1987-89.

CHAPTER - V

CASH MANAGEMENT

CHAPTER - 5

CASH MANAGEMENT

Cash is the most important current asset for the operation of the business. Cash is the basic input needed to keep the business running on a continuous basis, it is also the ultimate output expected to be realised by selling the service or product manufactured by the firm. The firm should keep sufficient cash, neither more, nor less. Cash shortage will disrupt the firm's manufacturing operation, while excessive cash will simply remain idle, without contributing anything towards the firm's profitability. Thus, a major function of the financial manager is to maintain a sound cash position. The intrinsic liquidity of cash makes it distinct from other assets. This is a risk-free asset. Hence, the measurement of liquidity of any asset is decided on the basis of its proximity to cash, cash is the most liquid form of current assets but it involves the most unprofitable blockage of resources

at the same time. Consequently, the financial manager is always faced with liquidity and profitability delemma while managing money.¹

Cash is the money which a firm can disburse immediately without any restriction. The term cash includes coins, currency and balances in its bank accounts. Sometimes near-cash items, such as marketable securities or bank time deposits, also included in cash. The basic characteristic of near-cash assets is that they can readily be converted into cash. Generally, when a firm has excess cash, it invests it in marketable securities. This kind of investment contributes some profit to the firm.

As the most liquid form of assets, money is the pivotal point around which all the activities of a firm revolve. The operations of a firm, in the ultimate analysis are all geared towards

1. The term 'Cash' and 'Money' are used as synonyms of each other for simplification

money. As Bolten puts into, cash is indeed, the oil (as it is for machinery) to lubricate the ever-turning wheels of business."¹ A firm has to maintain the optimum level of cash determined carefully in the light of expected swings in business activities.

Cash, in view of an economist is a purchasing power to satisfy human wants, in view of a lawyer it is a legal tender money, in view of a banker it is a liquid asset necessary to maintain liquidity to pay the cheques and bills when they become due and in view of an investor it is the swing that can be invested to generate further income. However, 'Cash Management' has to do with currency plus checking accounts and sometimes it also includes marketable securities and bank time-deposits.

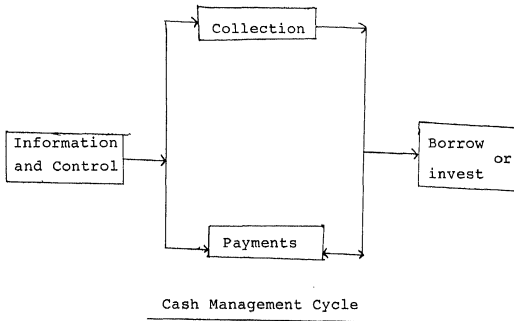
Money is the only universally accepted value. The final payment of each and every creditor

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1. Bolten, S.E., Managerial Finance - Principles and Practice, Boston, Houghton Mifflin Company, 1976. p. 388.

is to be made in cash. A business has to pay cash for wages, materials, spare parts, power, interest, dividend, taxes etc. Similarly to receive payment from its customers and other for sales services, commission, interest and so on. All these transactions are cleared finally in terms of cash. "The business may have many types of assets but cash is the only type that is universally acceptable to employees, vendors of goods and service, the tax collector, and creditors."¹

Though, money is an inevitable factor for business, it must not remain idle and static. It has to keep itself circulating - coming in and going out and changing its form frequently. Money, therefore, has come to be commonly styled as working of circulating capital. 'If your cash is not working for you, it is not an assets. It is a liability.'²

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1. Guthmann and Dougall, Corporate Financial Policy, N.Y., Prentice Hall, Inc., 1955, p. 389.
 2. J.J. Hampton, Financial, Decision - making, New Delhi, PHI 1980, p. 198.

FIGURE 5.1

Cash management is concerned with the managing of (i) Cash flows into and out of the firm (ii) Cash flows within the firm, and (iii) Cash balances held by the firm at a point of time by financing deficit or investing surplus cash. It can be represented by a cash management cycle as shown in Fig. 5.1.

Sales generate cash which has to be disburse out. The surplus cash has to be invested while deficit has to be borrowed. Cash management seeks to accomplish this cycle at a minimum cost. At the same, it also seeks to achieve liquidity

and control. Cash management assumes more importance than other current assets because cash is the most significant and the least productive asset that a firm holds. It is significant because it is used to pay the firm's obligations. However, cash is unproductive, unlike fixed assets or inventories, it does not produce goods for sale. Therefore, the aim of cash management is to maintain adequate control over cash position to keep the firm sufficiently liquid and to use excess cash in some profitable way.

'The system of Cash Management has spread wide day-by-day after the inflation of 1970s. Before that period it was not taken seriously. Today, the most profitable companies are also facing the problem of liquidity which again has stressed the need of cash management."¹

The management of cash is also important because, it is difficult to predict cash flows accurately, particularly the inflows, and that

1. P.R.A. Kirkman, Modern Credit Management, London, George Allen and Unwin Ltd., 1977, p. 13.

there is no perfect coincidence between the inflows and outflows of cash. During some periods, cash outflows will exceed cash inflows, because payments for taxes, dividends, or seasonal inventory build up. At the other times, cash may be realised in large sums promptly. Cash management is also important because cash constitutes the smallest portion of the total current assets, yet management's considerable time is devoted in managing it. In recent past, a number of innovations have been done in cash management techniques. An obvious aim of the firm now a days is to manage its cash affairs in such a way as to keep cash balances at a minimum level and to invest the surplus cash funds in profitable opportunities.

Technical solvency is the measurement of a firm's liquidity. The firm which always honours its bills a maturity is known as technically solvent. "Technical solvency relates to the ability to a given business unit to sheet its currently maturing obligations. It is a special sub-class of solvency within boundaries defined by the

time interval, say twelve months, under consideration. The measurement of technical solvency constitutes the core of all forms of short-term credit analysis."¹

Cash Management represents the art of keeping amount at hand to a minimum, while holding sufficient access to it to avoid financial difficulties and to permit the acquisitions of other assets whenever needed.² Cash is the life blood of a business concern, and its steady and healthy circulation throughout the entire business operation has been shown repeatedly to be the basis of business solvency.³ No business can afford the luxury of having too much cash because of its scarce availability and cost of borrowing. Therefore, 'an executive who manages the cash of an enterprises is by no means simply a cashier who pay bills and accepts payments. His

1. J.E. Walter, "Determination of Technical Solvency," O'Donnel & Goldberg (eds) Elements of Financial Administration, New Delhi, PHI, 1964, p. 74.
2. Guthmann and Dougall, op cit., p. 411.
3. Howard and Upton, Introduction to Business Finance, N.Y. USA, McGraw Hill Book Co. Inc. 1953, p. 188.

responsibilities are much more broader, he has to decide on a large number of related cash management problems.¹ Money has time value and it can earn a fixed rate of interest.' Clearly the more idle cash the firm holds the greater will be its opportunity costs from such a policy. Thus, the holding of large amount of liquid funds for speculative purpose for any length of time will be quite costly unless some reasonable and attractive opportunities do materialise."² Money is the real asset and it is to be maintained to keep the credit standing of a concern. As it is truly stated by Benjamin Franklin that in adversity a man can count on only three truly reliable friends 'a faithful dog, an old wife, and money in the bank'.³ The alert financial manager of a firm always wants to minimise

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1. Y.E. Orgler as quoted by R.R. Bari, Cash Planning and Management, New Delhi, Triveni Publications, 1980. p. 4.
 - 2.. Schultz & Schultz, Basic Financial Management USA, Intext Educational Publishers, 1972, p. 118.
 - 3.. Hunt, Williams and Donaldson, Basic Business Finance, Illinois, Richard D. Irwin, Inc. 1966, p. 94.

unproductive cash balances to invest temporarily excess cash advantageously, and to make the best possible arrangements for meeting planned and unexpected demands on the company's cash. At this situation the financial manager of a firm finds himself in dilemma between risk and return or profitability and liquidity in his firm. If the cash balances is kept high, the profitability will suffer at the cost of liquidity, while, if the cash balance is kept low liquidity will suffer at the cost profitability. This situation is a 'Trade-off between risk and return.' The financial manager is always faced with this problem while operating a going concern and his duty is to maintain balance between there two extremes (risk and return). However, your objectives should be not the avoidance of risk, but the intelligent management of risk.¹ 'Young professionals need a good understanding of not only the material

1 . M.P. Nair, as quoted in HBR, Boston, Jan/Feb 1955, p. 42.

flows that keep an industry healthy but the money flows without which it dies.¹

The entire exercise on working capital management is for the purpose of preventing cash being kept idle within the firm and in the process of losing opportunities of earning a return and/or incurring additional costs in the process of converting cash into other form of assets, as inventories and accounts receivable.²

PURPOSE OF HOLDING CASH

Cash is the barometer showing the changes in the affairs of the concern. The possible ups and downs in the activities of a firm can be easily guessed having a look on cash positions for a time period. At peak seasons inventories and receivables are built up, cash is lowered

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- 1 . D.R. Woods, Financial Decision-making in the Process Industry, Englewood Clifts. N.J., Prentice Hall Inc., 1975, p. 242
 - 2 . ABC Raj, Corporate Financial Management - An Introduction, New Delhi, Tata McGraw Hill Publishing Company Ltd., 1978, p. 62.

and in slack seasons inventories are low, cash is high.

The purpose of holding cash by a firm is the guarantee of the payment of liabilities when they become due and efficient operation of its business to earn profit. As it has been truly stated that a company lives by making products but it survives by making profits.¹

The firm's need to hold cash may be attributed to the following four motives.² Transaction Motive, Precautionary Motive, Speculative Motive and Compensating Motive. The cash is held by a firm to meet the daily transaction needs. Sometimes the expected cash inflow may be disturbed by some unexpected reasons affecting the payment of matured bills of the firm. To meet such unforeseen necessity the cash is maintained in the

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- 1 . T.S. Mc Alpine, The Process of Management, India Vikas Publishing House, 1981, p. 65.
 - 2 . Pogue, G.A. Faucett, R.B. and Bussard R.N., "Cash Management : A systems Approach." Industrial Management Review, (Feb. 1970), pp. 55-74.

name of precautionary balance. Some firms might be willing to exploit the chance of making profit by speculation and some balance may be maintained for that purpose. The commercial banks, while granting short term loans to the firms, generally ask them to maintain a minimum balance with the bank until the loan is refunded. This is the compulsion made by the banks and known as compensating balance. "If you are big and powerful enough, you can refuse to keep a compensating balance." But when money is short you may find yourself at the bottom of the 'bankers' list', and they have pretty strong union.¹ However, there are two basic models for the money demand by a firm. First one is the transaction model and the second one is the wealth model as other assets of firm.

CASH PLANNING

Cash flows are inseparable parts of the business operations of all firms. The firm needs

1'. Shephard - A Columbian Carbon's President
 "The New Power of the Financial Executive",
 Fortune USA, Jan 1962, p. 138.

cash to invest in inventories receivables and fixed assets and to make payment for operating expenses in order to maintain growth in sales and earnings. It is possible that a firm may be making adequate profits, but may suffer from the shortage of cash as its growing needs may be consuming cash very fast. The "cash poor" position of the firm can be corrected if its cash needs are planned in advance. At times, a firm can have excess cash with it if its cash inflows exceed cash outflows. Such excess cash may remain idle. Again, such excess cash flows can be anticipate future cash flow and need of the firm and reduces the possibility of idle csh balances (which lower firm's profitability) and cash deficits (which can cause the firm's failure).

Cash planning is a technique to plan for and control the use of cash. The fore-casts may be based on the present operations or the anticipated future operations. Cash plans are very crucial in developing the over it operating

plans of the firm. As the firm grows and business operations become complex, cash planning become complex, cash planning becomes inevitable for its continuing success.

CASH FORECASTING AND BUDGETING

Cash budget is the most significant device to plan for and control cash receipts and payments. A cash budget is a summary statement of the firm's expected cash inflows and outflows over a projected time period. It gives information on the timing and magnitude of expected cash flows and cash balances over the projected period. This information helps the financial manager to determine the future cash and liquidity of the firm.¹

Thus, one of the significant advantage of cash budget is to determine the net cash inflow or outflow so that the firm is enabled to arrange finances. However, the firm's decision for

1 . Ibid, p. 422, See Weston J.F. and Copeland, T.E., Managerial Finance, Drydon Press, 1986, pp. 223-26 for an illustrative discussion on cash budgeting.

appropriate sources of financing should depend upon factors such as cost and risk. Cash budget helps a firm to manage its cash position. It also helps to utilise idle funds in better ways. On the basis of cash budget, the firm can decide to invest surplus cash in marketable securities and can profits.

Cash forecasts are needed to prepare cash budgets. Cash forecasting may be done on short term or long term basis. Generally, forecasts covering periods of one year or less are considered short term those extending beyond one year are considered long term.

It is comparatively easy to make short term forecasts. The important uses of carefully developed short term cash forecasts are, (i) It helps to determine operating cash requirements (ii) to anticipate short term financing (iii) to manage investment of surplus cash. A carefully and skillfully designed cash forecast helps a firm to (i) select securities with appropriate

maturities and reasonable risk (ii) avoid over and under investing and (iii) maximise profits by investing idle money. Short run cash forecasts also serve many other purposes. For example, multi divisional firms use them as a tool to coordinate the flow of funds between their various divisions as well as to make financing arrangements for these operations. These forecasts may also be useful in determining the margins or minimum balances to be maintained with banks. Still other are uses of these forecasts are¹ : (1) Planning reductions of short and long term debt, (2) Scheduling payments in connection with capital expenditures programmes, (3) Planning forward purchase of inventories, (4) Checking accuracy of long range cash forecasts, (5) Taking advantage of cash discounts offered by suppliers, (6) Guiding credit policies.

1 . Conference Board, Cash Management, New York : The Conference Board, Inc. 1973, p. 5.

In conclusion, only the preparation of cash budget is not the end of the problem. The deviations from the budgeted figures are to be taken seriously after the arrival of actual data and the causes and remedies of such deviations are to be determined. This is the process of budgetary control which keeps on going in a concern.

INFLOWS AND OUTFLOWS OF CASH

The centre of cash management is the synchronization of inflows and outflows of cash. If the cash outflows of a firm are exactly matched with the cash inflows during the same period then all the problems are over. In actual life of a firm this does not happen so. During the course of one year, sometimes the inflows are higher and sometimes the outflows are higher.

In determining the inflows and outflows of cash following aspects are considered : (a) Synchronization of cash flows (b) Short cost and excess costs (c) uncertainty in cash flows and (d) Procurement and management costs.

However, exact synchronization is not possible and the differences between inflows and outflows are to be accounted for. If the cash balance is too low than required, the cost of not paying liabilities at maturity is the short cost. In this situation the liquidity of the firm is threatened which may lead it towards technical insolvency. The excess cash balance position of a firm creates the situation of under utilised resources, which causes to happen higher cost of money than the return there of. Both of the above situations, short costs and excess costs, are dangerous for the existence of a firm. Thus, management should make every effort to speed up cash flowing into the firm and delay cash flowing out of the firm.¹

From the long term investment point of view, cash inflow indicates the speed with which a company is getting its investment back in liquid

1. E.W. Walker, Essentials of Financial Management, India, PHI 1974, p. 76.

form.¹ Nonetheless, variances from the sales and collection schedules that produce more cash than planned are less serious than variances that produce less.² The cash inflows can be controlled by preventing internal leakages of collected cash and by speeding collections whereas, cash outflows may be efficient by preventing leakages and delaying the disbursements as far as possible.

The cash flow is a tool for the measurement of corporate health through the appraisal of stock values and this tool is used these days by management people, security analysts, accountants and investors to investigate the various dimensions of a corporation.³

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1. Howard and Upton Op. Cit., p. 9.
 2. Brandt, Business Finance - A Management Approach, N.J. Englewood Cliffs, Prentice Hall Inc. 1965, p. 139.
 3. Blecke, C.J., Financial Analysis for Decision Making, India, D.B. Taraporevala Sons & Co., 1981, p. 49.

ACCELERATION OF COLLECTIONS

Acceleration of collections has certain techniques as, (a) to speed up the mailing time of payments from customers to the firm, (b) to reduce the time during which payments received by the firm remain uncollected, and (c) to speed up the movement of funds to disbursement banks. Modern big business houses in developed countries have adopted either 'concentration banking system' or 'lock box system' to achieve the above mentioned objectives of accelerating collections.

Under concentration banking system multiple collection centres are established at different places and customers of a particular locality are directed to pay their debt in a nearby centre. Generally this job is given to a bank having its branches at different parts of the country. The collection centres immediately transfer the funds received to the head office account by Telegraphic Transfer (TT). "Concentration banking is one way to reduce the size of the float, difference between the amount of deposit and

the amount of usable funds in a bank."¹ This method is useful for a big business concern which has several customers from the widespread area and where the daily collection of funds is heavy.

CONTROL OF DISBURSEMENT

The firm is suggested to delay the payment of its obligations as far as possible. But there is limit of this policy. If the discount, the early payment is suggested. Likewise, the firm can not delay the payment is suggested. Likewise the firm can not delay the payment beyond the last day of contract, otherwise the firm's credit standing will be lost. The firm should manage its policy within these limitations. However, the combination of fast collections and slow disbursements will result in maximum availability of funds.² Shrewd cash management boils down to getting maximum mileage out of every dollar.

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- 1.. J.C. Van Horne, Fundamentals of Financial Management, New Delhi, PHI, 1978, p. 94.
 - 2.. J.C. Van Horne, Op. Cit., p. 98.

To do this, a firm will speed its cash inflows and slow down its payments to the maximum degree permissible¹

INVESTMENT OF EXCESS MONEY

To invest the temporary excess cash in most liquid and interest bearing securities is one of the most challenging functions for the financial manager. Here also the balance is to be maintained between liquidity and profitability of such securities. The high earning securities are risky and less risky securities are earning securities but earning very low. There is trade of between the benefits of liquidity and cost of maintaining it. "If the firm could both borrow and lend at the same interest rate, there would be no, cost to maintaining whatever level of liquidity was desired to reduce the profitability of technical insolvency."² If transactions and

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- 1.. Christy and Roden, Finance : Environment and Decision, N.Y., Harper International Edition, 1976, p. 387.
 - 2.. J.C. Van Horne, Financial Management and Policy, New Delhi, PHI, 1979, p. 327.

inconvenience costs were zero and conversion between the two assets were instantaneous, the firm would hold no cash."¹

Marketable securities are of many dimensions differing in their nature, safety and liquidity. In USA they are termed as Treasury Bills, Commercial and Finance Papers. Time certificate of Deposits, Treasury Notes, Bankers 'Acceptances and soon. Some of them are issued by the government which are highly liquid but less paying and others are issued by banks and other finance institutions which are a bit risky but more paying.. The finance manager of a firm has to decide the type of securities to be purchased and time period for which the funds are free from business. He evaluates the securities before making actual investment in them , on them, on the ground of some facts.

1.. J.C. Van Horne, Fundamentals of Financial Management, Op. Cit., p. 417.

MARKETABILITY :

It is the ability of the security holder to convert his security into cash in no time. Marketability has two important dimension : the price realised and the time necessary to sell the securities. It is necessary that the two marketable securities would have higher yield expectance to attract the investors.¹

DEFAULT RISK :

Is there any chance of default from the side of borrower regarding the repayment of interest and principal. Sometimes the default is insured with the insurance company and premium is charged to the borrower. But default free securities are yielding low return and the firms expecting high return may purchase the default risk securities.

MATURITY :

The maturity of a security held is always

1.. J.C. Van Horne, Op. Cit., p. 424.

reconciled with the idle time for which the money has been freed from the business. Generally, the long maturity securities are taken as risky because there is more chance of fluctuations in principal values.

The investment in securities is a matter of temporary arrangement for the profitable use of idle money. Where the cash is permanently in excess, the management probably should use to acquire fixed assets, retire debt or enlarge dividends.¹ Future, the temporary excess money is used either to reduce borrowings or to purpose marketable securities.²

PORTFOLIO MANAGEMENT :

When a firm invests in a variety of projects, as most firms do, the combination can be viewed as a portfolio. In general, portfolio of investment is less risky than any separate

1.. Christy & Roden, op. cit., p. 388.

2.. J. Sagan, "Towards a Theory of Working Capital Management." Journal of Finance, N.Y., May 1955, p. 126.

individual investment. Consequently, while evaluating an investment opportunity. One should consider the diversification effect of the investment on the firm's portfolio management. "By combining risky securities into a portfolio, an investor normally can achieve a reward/risk combination which is significantly better than that of any of the individual securities."¹

The investment in marketable securities is the function of two interdependent decisions : the money amount to be invested and the type of securities to be purchased. These two decisions result in expected cash flows and certainty of these cash flows. It is the duty of the finance manager to arrange the securities in such a way that they mature on approximately the same date when the funds will be needed. This will protect the firm in discounting the securities at high cost before they actually mature. This synchronization between maturity date of securities

1. Solomon and Pringle, op. cit., pp. 356-357.

and cash need of the firm is the function of portfolio management. In other word, portfolio management is concerned to manage the inflow and outflows of cash in such a way that only the exact needed cash amount will be available to the firm. However, the exact synchronization between future cash need of the firm and expected inflows from securities is difficult to manage.

It is evident from the above discussion that the duty of the financial manager regarding the management of cash and marketable securities is continuous and ever challenging in a going concern. He is expected to maintain a balance between risk and return and thereby maximise the value of the firm. The two fold objective of financial management reveals the way to maximise the net present value or wealth by seeing that cash is on hand to pay bills on time and to assist in the most profitable allocation of resources within the firm.¹

1. R.W. Johnson, Financial Management, Boston, Allyn and Bacon, Inc., 1966, p. 10.

DETERMINING THE OPTIMUM CASH BALANCE :

One of the primary responsibilities of the firm so that dues may be settled in time. The firm needs cash not only to purchase raw materials and pay wages, but also for payments of dividend, interest, taxes and countless other purpose. The test of liquidity is really the availability of cash to meet the firm's obligations when they become due.

Thus, cash balance is maintained for transactions purposes and an additional amount may be maintained as a buffer or safety stock. The financial manager should determine the appropriate amount of cash balance. Such a decision is influenced by a trade off between risk and return. If the firm maintains a small cash balance, its liquidity position becomes weak and suffers from a paucity of cash to make payments. But a higher profitability can be attained by investing, released funds in some profitable opportunities.

When the firm runs out of cash, it may have to sell its marketable securities, if available or borrow. This involves transaction costs. On the other hand if the firm maintains a high level of cash balance, it will have a sound liquidity position but forego the opportunities to earn interests. The potential interest lost on holding large cash balance involves an opportunity cost to the firm. Thus, the firm should maintain an optimum cash balance, neither a small nor a large cash balance. To find out the optimum cash balance, the transaction costs and risk of too small a balance should be method with the opportunity costs of too large balance.¹

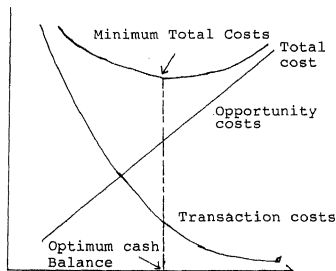


Fig 5.2 : Optimum Cash Balance

1. Solomon and Pringle, op. cit. p. 125

Fig. 5.2 shows this trade off graphically. If the firm maintains larger cash balances, its transaction costs would decline, but the opportunity costs would increase. At point X the sum of the two costs is minimum. This is the point of optimum cash balance which a firm should seek to achieve.

Receipts and disbursements of cash are hardly in perfect synchronisation. Despite the absence of synchronisation, it is not difficult to determine the optimum level of cash balance if cash flows are predictable. It is simply a problem of minimising the total costs the transaction costs and the opportunity costs. The determination of the optimum working cash balance under certainty can thus, be viewed as an inventory problem in which we balance the costs of too little cash (transaction costs) against the cost of too much cash (opportunity costs).¹

1. Ibid, 186.

Cash flows, in practice, are not completely predictable. At times, they may be completely random. Under such a situation, a different model based on the technique of control theory, is needed to solve the problem of appropriate level of working cash balance.¹

Given such data, the minimum and maximum limits of the cash balances should be set. Greater the degree of variability, higher the minimum cash balance. Whenever the cash balance reaches the maximum level, the difference between maximum and minimum levels should be sold and the proceeds should be transferred to working cash balances. Formal mathematical models can be used to resolve the problem of fluctuating cash flows.²

On the question of the appropriate level of cash balance, a firm arrives at reasonable solution, by combining formal cash management

1. Ibid, 187.

2.. For detail, see Dacillenbach, H.F., "Are Cash Management Models Worthwhile?" Journal of Financial and Quantitative Analysis (Sept. 1974), pp. 607-626.

models and the techniques of cash budgeting with its experience and experiments. The extent to which analysis should be carried would be governed by the cost of the analysis. In case of most of the firms, the use of formal mathematical models is not likely to be beneficial. The cost of obtaining the necessary information for using such models may for exceed the savings expected from the solutions. The results on the basis of experience and experiment may prove to be more economical.

Study of Trend of Cash & Bank Balances of IFCO

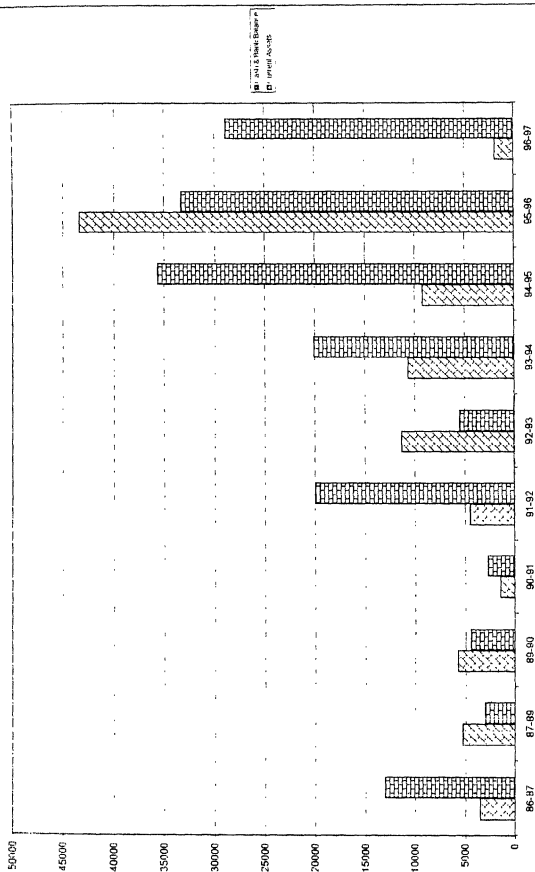


TABLE 5.1**TREND OF CASH AND BANK BALANCE OF IFFCO****PHULPUR UNIT**

(Rs. in Lakhs)

Year	Cash & Bank Balance	Current Assets	Total Amount of Current Assets
1986-87	3,499	13,007	16,506
1987-89	5,256	3,005	8,261
1989-90	5,709	4,430	10,139
1990-91	1,472	2,720	4,192
1991-92	4,462	19,969	24,461
1992-93	11,288	5,522	16,810
1993-94	10,608	20,048	30,656
1994-95	9,186	35,629	44,815
1995-96	43,382	33,285	76,667
1996-97	1,848	28,851	30,699

Source : Compiled from various Annual Reports of
relevant years of IFFCO.

The analysis worked out in table No. 5.1 indicates that the total current assets from all the available sources. Total amount of current assets were Rs. 16,506 lakhs in the year 1986-87, which increased to Rs. 30,699 lakhs in the year 1996-97. In the middle during 1990-91, the total current assets had decreased upto the minimum of current Rs. 4,192 lakhs, which again increased upto Rs. 24,461 lakhs during the year 1991-92. There after it decreased to Rs. 16,810 lakhs during the year 1992-93, which increased continuously from Rs. 30,656 lakhs in the years 1993-94 to the maximum of Rs. 76,667 lakhs in the year 1995-96.

The amount was cash and Bank balance in the year 1986-87 was Rs. 34.99 lakhs which increased upto Rs. 5,209 lakhs till the year 1989-90. Thereafter it decreased to be minimum of Rs. 1,472 lakhs in the year 1990-91, which again increased upto Rs. 11,288 lakhs till

the year 1992-93. Thereafter gradually decreased upto Rs. 9186 lakhs till the year 1994-95. But the year 1995-96 it suddenly increased upto Rs. 43,382 lakhs and decreased suddenly upto Rs. 1848 lakhs in the year 1996-97.

After the analysis of the table 5.1, it is quite clear that the current assets of IFFCO Phulpur Unit has been increased from Rs. 13007 lakhs 1986-87 to Rs. 28751 lakhs in 1996-97. The highest amount of current assets is Rs. 35629 lakhs in 1994-95 and lowest are Rs. 3005 lakhs in 1987-89. But decreased upto amount of Rs. 2720 in 1990-91. The contribution of IFFCO which has been shown under loans and advances shall be adjusted on handling over the project to IFFCO.

It has also been illustrated chart No. 5.1 to clarified the position well.

Loans & Advances of IFFCO (Rs. in Lakh)

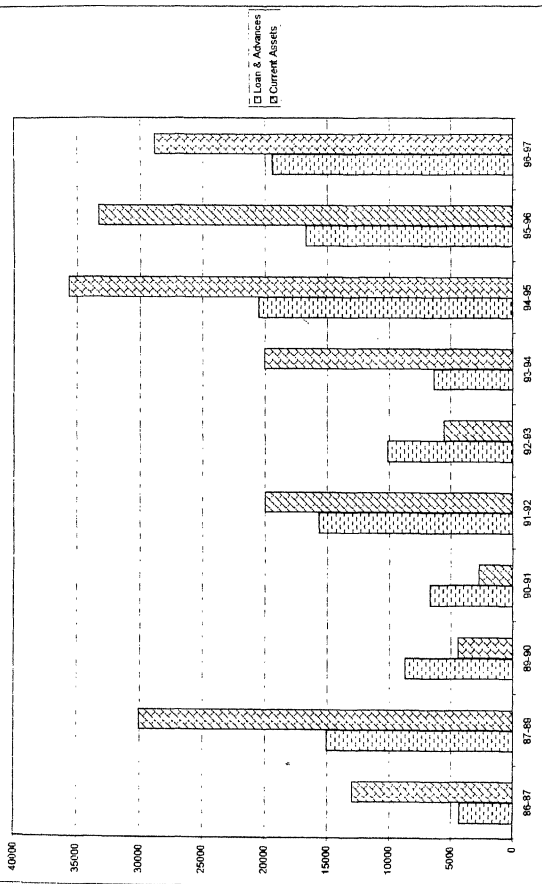


TABLE 5.2LOANS AND ADVANCES OF IFFCO PHULPUR AT A GLANCE

(1986-87 to 1996-97)

(Rs. in Lakhs)

Year	Loans & Advance	Current Assets
1986-87	4,314	13,007
1987-89	15,044	3,005
1989-90	8,689	4,430
1990-91	6,684	2,720
1991-92	15,669	19,969
1992-93	10,116	5,522
1993-94	6,395	20,048
1994-95	20,516	35,629
1995-96	16,723	33,285
1996-97	19,414	28,851

Source : Compiled from various Annual Reports
of relevant years of IFFCO.

The analysis on loans and advances along with current assets worked out in table 5.2 indicates that the amount of loans and advances increased from Rs. 4314 lakhs in the year 1986-87 to Rs. 19,414 lakhs in the year 1996-97, which the current assets of the IFFCO Phulpur Unit increased from Rs. 13007 in the year 1986-87 to Rs. 28,851 lakhs in the year 1996-97. The highest loans and advances i.e. Rs. 20,516 lakhs was reported the year 1994-95. Accordingly the highest loans of current assets i.e. Rs. 35,629 lakhs was also reported in the year 1994-95. The middle years the amount of loans and advances was found to be quite erratic. Accordingly the amount of current assets were also found to be errativ with a slight variation in the later years of the decate under reference.

Due to the change in Accounting Policy, the stock in process at the year end has been valued and accordingly the profit for the year is higher by Rs. 105.52 lakhs. Balance in respect of some of the contractors/vendors and consumers/suppliers are subject to confirmation/reconcilia-tion and consequential adjustments, if any. The society is implementing Farm Forestry/IFFDC

project on behalf of IFFDC. The total expenditure incurred till 31st March, 1997 is Rs. 1234.21 lakhs (previous year Rs. 782.79 lakhs), out of which an amount of Rs. 304.42 lakhs (previous year Rs. 212.04 lakhs) has been met out of contribution by IFFCO, Rs. 442.62 lakhs (previous year Rs. 436.97 lakhs) has been met out of grant received from Government of India and other State Government and balance Rs. 487.17 lakhs (previous year Rs. 133.78 lakhs) out of contribution by India - Canada Environment Facility (ICFF) for IFFDC Project.

The contribution of IFFCO which has been shown under loans and advances shall be adjusted on handling over the project to IFFDC.

Advances and other amounts recoverable in cash or in kind or for value to be received includes :

	As at 31st March 1997	As at 31st March 1998
	(Rs. in lakhs)	(Rs. in lakhs)
Due from Employees	8,286	7,925
Prepaid Expenses	1,561	944
Vendors/Contractors for Capital Works	566	1,101
Other Loans	1,002	1,031

Other deposits include payments against disputed liabilities towards :

- (a) Sales Tax - Rs. 593.99 lakhs (previous year Rs. 623.68 lakhs).
- (b) Excise Duty - Rs. 16.00 lakhs (previous year Rs. 16.00 lakhs).

Table 5.2 presents the details of current assets of IFFCO (Phulpur Unit). We have includes the Loans and Advances, Bank Balance, Debtors the year 1994-95 shows that in this year the amount of Current Assets of IFFCO (Phulpur Unit) was highest with Rs. 35629 (in lakhs), while the year 1986-87 show Rs. 13007 lakhs which is lowest amount of Current Assets of IFFCO.

The proportion of the loans and advances with that of current assets is shown in Chart No. 5.2 which clearly shows that the highest current assets as well as loans and advances were recorded in the year 1994-95 against the lowest in the year 1990-91.

A Comparative Study of Bank Balance & Cash & Working Capital of IFFCO (Rs. In Lakhs)

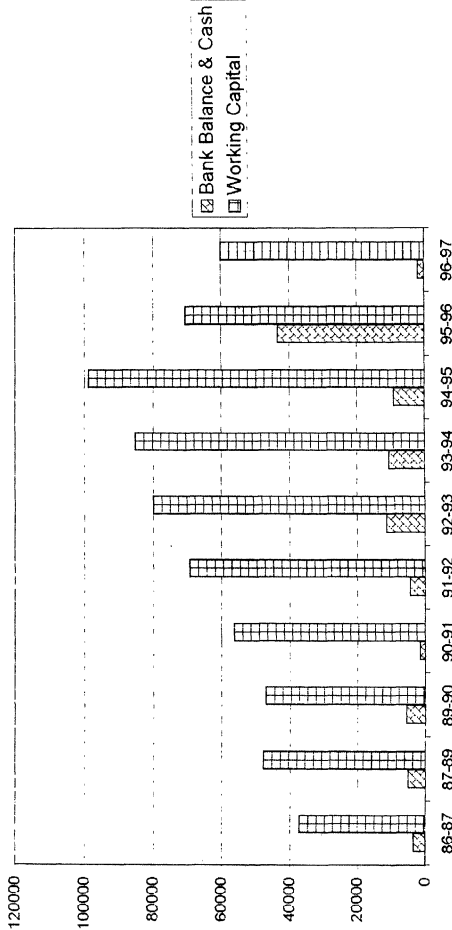


TABLE 5.3**A COMPARATIVE STUDY OF BANK BALANCE AND WORKING****CAPITAL OF IFFCO**

(Rs. in lakhs)

<u>Year</u>	<u>Bank Balance & Cash</u>	<u>Working Capital</u>
1986-87	3,499	37,287
1987-89	5,250	47,773
1989-90	5,709	47,068
1990-91	1,472	56,388
1991-92	4,462	69,277
1992-93	11,288	79,997
1993-94	10,608	85,228
1994-95	9,186	98,760
1995-96	43,382	70,484
1996-97	1,848	60,007

Source : Compiled from various Annual Reports of
Relevant Years of IFFCO.

The analysis worked out in table No. 5.3 indicates that a comparative study of Bank Balance and working capital of IFFCO. The amount was Cash and Bank Balance in the year 1986-87 was Rs. 3,499 lakhs which increased upto Rs.5,709 lakhs till the year 1989.90. Thereafter it decreased to be minimum of Rs. 1,472 lakhs in the year 1990-91, which again increased

upto Rs. 11,288 lakhs till the year 1992-93. Thereafter gradually decreased upto Rs. 9,186 lakhs till the year 1994-95. But the year 1995-96 it suddenly increased upto Rs. 43,382 lakhs and decreased suddenly upto Rs. 1,848 lakhs in the year 1996-97.

After the analysis of the table No. 5.3, it is quite clear that the working capital has been increased from Rs. 37,287 lakhs 1986-87 to Rs. 60,007 lakhs in 1996-97. The highest working capital Rs. 98,766 in the year 1994-95 and lowest in the year 1986-87 which is Rs. 37,287 lakhs. After the period of 1994-95 till 1996-97 the working the period of 1994-95 till 1996-97 the working capital is decreasing continuously.

The position of Bank Balance and cash working capital of IFFCO has been shown clearly in the Chart 5.3 where the working capital has been found to be the highest in the year 1994-95 and lowest in the year 1986-87. But Bank Balance and Cash has been found to be the highest in the year 1995-96 and lowest in the year 1990-91, it has also been illustrated chart No. 5.3 to clarified the position well.

A Comparative Study of Cash Management (Rs. in Lakhs)

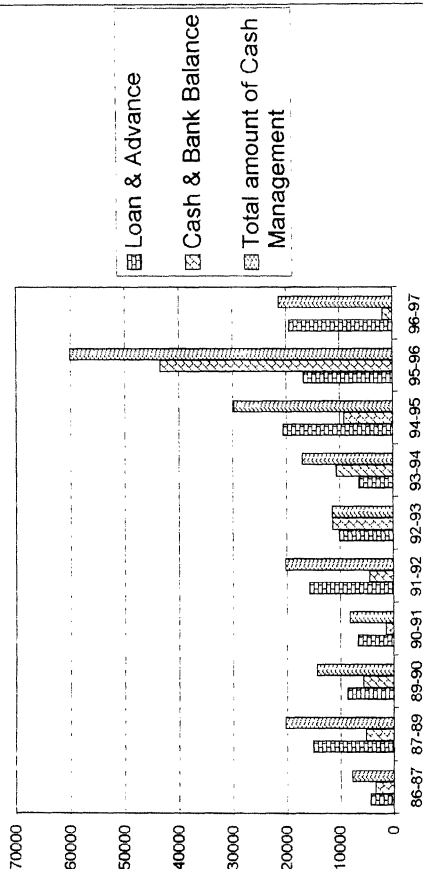


TABLE 5.4**A COMPARATIVE STUDY OF TOTAL AMOUNT OF CASH**

(Rs. in lakhs)

Year	Loans & Advances	Cash & Bank Balance	Total Amount of Cash
1986-87	4,314	3,499	7,813
1987-89	15,044	5,250	20,294
1989-90	8,689	5,709	14,398
1990-91	6,684	1,472	8,156
1991-92	15,669	4,462	20,131
1992-93	10,116	11,288	11,404
1993-94	6,395	10,608	17,003
1994-95	20,516	9,186	29,702
1995-96	16,723	43,382	60,105
1996-97	19,414	1,848	21,262

Source : Compiled from various Annual Reports
of Relevant Years of IFFCO.

The analysis worked out in table No. 5.4 indicate that the total amount of cash was found to be the highest i.e. Rs. 60,105 lakhs in the year 1995-96 against the lowest i.e. Rs. 7,813 lakhs in the year 1986-87. The remaining years it has been found to vary from Rs. 8,156 lakhs in the year 1990-91 to Rs. 29,702 lakhs in the year 1994-95, while the amount of cash and bank balance has been found to be highest i.e. Rs. 43,382 lakhs in the year 1995-96 against the lowest i.e. Rs. 1,472 lakhs in the year 1990-91. The amount of loans and advances has been found to be the highest i.e. Rs. 20,516 lakhs in the year 1994-95.- against the lowest i.e. Rs. 4,314 lakhs in the year 1996-97. Thus both loans and advances as well as cash and bank balance there was not any set relationship and accordingly the total amount of cash has also not any set relation with the same.

The comparision of the components of the total cash shown in Chart No. 5.4 also

indicate that the total amount of cash was highest during the year 1995-96 in which the share of cash and bank balance was proportionately much higher than the loans and advances. While the total amount of cash in the year 1986-87 and 1990-91 was found to be lowest where in the cash and bank balance and loans and advances were quite meagre. The actual amount of total cash in the year 1994-95 was also found quite considerable in which the share of loans and advances during the remaining years the total cash and the hare of components where found to be more or less similar.

CHAPTER - VI

INVENTORY MANAGEMENT

CHAPTER - 6

INVENTORY MANAGEMENT

Inventories constitute the most significant part of current assets of a large majority of companies in India. On an average, inventories are approximately 60 per cent of current assets in public limited companies in India. Because of the large size of inventories efficiently and effectively in order to avoid unnecessary investment in them. An undertaking neglecting the management of inventories will be Jeopardising its long run profitability and may fail ultimately. It is possible for a company to reduce its levels of inventories to a considerable degree, e.g. 10 to 20 per cent, without any adverse effect on production and sales by using simple inventory planning and control techniques.

The operation procedure of an enterprise mostly depends upon the goods or services it deals in. Inventory denotes those goods or services awaiting either for immediate sale or for further

processing in the business concern. Inventories are stocks of the product a company is manufacturing for sale and components that make the product. The various forms in which inventories exist in a manufacturing business concern are : raw materials, work in process and finished goods. Within manufacturing firms there will be differences. On the other hand, inventories of a consumer product concern will not be large because of short production cycle and fast turnover.

INVENTORY CONCEPT :

Broadly speaking, inventories include machines, machine parts, tools and even personnel, trucks, cash and auxiliary equipment of all kinds required to run a business. In non-manufacturing organisation, evaluation of other things might also be considered as inventories - a library's inventory of books, a bank's inventory of money, a consulting organisation's inventory is specialists

skill.¹ The modern firm may not be expected to meet the demand of its product with immediate production. Thus inventories serve to uncouple successive operations in the process of making a product and getting it to customers.²

The question of managing inventories arises only when the company holds inventories. Maintaining inventories involves tying up of the company's funds and incurrence of storage and handling costs. If it is expensive to maintain inventories, why do companies hold inventories? There are three general motives for holding inventories.³

1. The transactions motive which emphasises the need to maintain inventories to facilitate smooth production and sales operations.

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1. Buchan and Koenigsberg, Scientific Inventory Management India PHI, 1977, Page (X) 'Foreword'.
 2. J.F. Magee, "Guides to Inventory Policy," HBR Boston Jan/Feb, 1956, p. 51.
 3. Starr, Martin, K. and David, W. Miler. Inventory Control : Theory and Practice. Englewood Cliffs, N.J. Prentice Hall, 1962, p. 17.

2. The precautionary motive which necessitates holding of inventories to guard against the risk of unpredictable changes in demand and supply forces and other factors.

3. The speculative motives which influences the decision to increase or reduce inventory levels to take advantage of price fluctuations.

A business concern should maintain adequate stock of materials for a continuous supply to factory for an uninterrupted production. As shown in Fig. 6.1 by holding inventories the firm makes itself able to separate the process of purchasing, producing and selling. Any particular inventory for one organisation may not be the item of inventory for another organisation. Thus, inventories denote those items essential to the operation of a production distribution system.

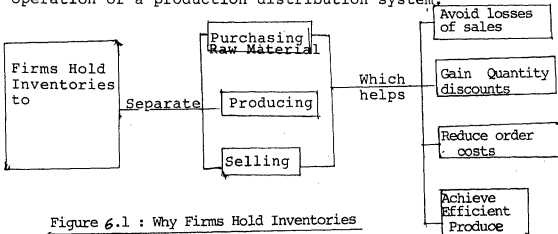


Figure 6.1 : Why Firms Hold Inventories

Inventories are necessary because it takes time to complete an operation and to move product from one stage to another. On the other hand, some inventories are also employed for organisational reasons as, to let one unit schedule its operations more or less independently to another. Inventories also serve some important social functions by providing efficient consumer service through inflexible production and by helping the stabilised employment of skilled manpower" in most cases, inventory is as essential to the operation of a production - distribution system as are plant, machines and transport equipment."¹

Inventory needs special treatment in the sphere of working capital management due to undermentioned reasons.

(i) Inventory has a significant volume in most firms.

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1. J.F. Magee, Production Planning and Inventory Control N.Y., McGraw Hill Book Company Inc. 1958, p. 4.

(ii) Inventory is the least liquid among other current assets; and

(iii) Changes in the level of inventory have important economic effect on the firm.

"When you need money, look to your inventories before you look to your bankers.¹ Thus goes the popular adage about inventories due to the prevailing bankers' policy that they lend lot of their money on the security of 'inventory'. Inventory accounts for a large part of many business concern' total assets and its effective management is required both for the proper functioning of the normal production - distribution operations of the business, and for keeping inventory holding costs to a minimum. "Inventories enable firms in the short-run to produce at a rate greater than purchase of raw materials and vice-versa, or to sell at a rate greater than production and vice-versa."²

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1. A.B.C. Raj, Corporate Financial Management, New Delhi, Tata McGraw Hill Pub. Company, 1978, p. 55.
 2. Khan and Jain, Financial Management, New Delhi, Tata McGraw Hill Publishing Company, 1981, p. 116.

The objectives of holding inventory by a firm may be to bridge the time gap between production and sales to meet competition, to reduce the discontinuities in production process and to hedge against price increase and material shortages. "Inventories also serve as cushions in each stage of planning, to absorb the shocks of demand forecast errors to permit more effective use of facilities and staff in the face of demand fluctuations, and to isolate one part of the system from the next to permit each to work more effectively."¹

The objectives of inventory management are directed to minimise the firm's investment in inventory and to meet the demand for the product by efficiently organising the firm's production and sales operations. To optimise the value of the firm, the business concern always finds itself in trade off minimising the cost and maximising

1. J.F. Magee, Production Planning and Inventory Control, Op Cit. p. 10.

the benefit of holding certain level of inventory. Nevertheless, it is no exaggeration to say that inventory control can make or break a company and this has been approved by most of the exponents of inventory management.

Both excessive and inadequate inventories are not desirable. There are two danger points within which the firm should operate. The objective of inventory management should be to determine and maintain optimum level of inventory investment. The optimum level of inventory will lie between two danger points of excessive and inadequate inventories.

The firm should always avoid a situation of over investment or under investment in inventories. The major dangers of over investment are (a) the unnecessary tie up of the firm's funds and loss of profit, (b) excessive carrying costs and (c) the risk of liquidity. The excessive level of inventories consume funds of the firm, which cannot be used for any other purpose, and thus, it involves an opportunity cost. The carrying

costs, such as the cost, such as the costs of storage, handling, insurance, recording and inspection, also increase in proportion to the volume of inventory. These costs will impair the firm's profitability further. Excessive inventories carried for a long period increase chances of loss of liquidity. It may not be possible to sell inventories in time and at full value. Another danger of carrying excessive inventory is the physical deterioration of inventories while in storage. In case of certain goods or materials deterioration of occurs with the passage of time, or it may be due to mishandling and improper storage facilities. These factors are within the control of management the unnecessary investment in inventories can, thus, be cut down.

The aim of inventory management, thus, should be to avoid excessive and inadequate levels of inventories and to maintain sufficient inventory for the smooth production and sales operations. Efforts should be made to place an order at the right time with the right source to acquire the

right quantity at the right price and quality.

An effective inventory management should :

1. ensure a continuous supply of materials to facilitate uninterrupted production,
2. maintain sufficient stocks of raw materials in periods of short supply and anticipate price changes,
3. maintain sufficient finished goods inventory for smooth sales operation and efficient customer service,
4. minimise the carrying cost and time and
5. control investment in inventories and keep it at an optimum levels.

Among the member of different management group in a corporation, there are always conflicting views about the appropriate size of inventory holding. "The sales manager commonly says that the business concern must never make a customer wait, the production manager says there must be long manufacturing runs for lower costs and

steady employment, the treasurer says that large inventories are draining off cash which could be used to make a profit."¹ These people are considered to be the functional staff and express their views for the interest of their views for the interest of their functions. However, the financial manager is playing an increasingly important role in determining the general nature of the control exercised, and the pricing policies adopted for inventory management."²

Among the components of working capital, inventories have got more than fifty percent of value and therefore many theories and sophisticated techniques have been developed in the area of inventory management. "In recent years the greatest improvement within the area of current assets management seem to have taken place in the area

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1. J.F. Magee, "Guides to Inventory Policy", Elements of Financial Administration (eds) O'Donnel & Goldberg, New Delhi, PHI 1964, p. 128.
 2. Cohen and Robbins, "The Financial Manager", N.Y., Harper and Row Publishers (1966), p. 313.

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of inventory control and investment.

STRUCTURE OF INVENTORY :

The volume of inventory may be comprised of raw materials and other direct materials, goods in process, finished stock and other supplies not directly used in production. Maintaining the optimum level of all these inventories is also a trade off between risk and return. Risk is involved in carrying the volume of inventory due to wastage, obsolescence etc. and return is involved with the benefit of large scale, easy production and unbroken sales.

For the most efficient control purpose, the inventories are emphasised into different groups, as maintained above, which may help to locate the weaker side for immediate corrective action. Hence, "each major categories of inventory differ significantly from the others, so that analysis of the inventory investment and its

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1. Schultz and Schultz, Basic Financial Management, USA, Interest Educational Publishers, 1972, p. 147.

management can be most meaningful, if each category is thought of as a separate and distinct 'animal'.¹

The investment in inventory as a whole may be minimised in a manufacturing business concern, if :

- (a) purchased materials are continuously available from supplies when and as needed and at stable prices,
- (b) sales are stable over long periods or variations in sales are predictable with great accuracy in advance,
- (c) manufacturing operations can be counted upon to proceed precisely on schedules are subject to easy and cost free adjustment so that output will match perfectly with changes in customer demand.

The above stated conditions are theoretical and imaginary and do not hold good in the modern era of competitive existence for a business firm.

1. Hunt, Williams

These days, the volume of inventory moved up and its efficient management has become necessary. Inventories of different groups need special care for their control in between risk and return trade off.

The levels of raw materials are influenced by anticipated production, seasonality of production reliability of sources of supply and efficiency of scheduling purchases and production operations, whereas, work in process level is inventory can be reduced further by purchasing semi-finished items and inventory turnover may be increased by decreasing production period. Consequently, "the control of work in process inventories is one of the major areas in which opportunities remain in the management of inventory assets for improved cash flow and profitability."¹

On the other hand, level of finished goods inventories is a matter of co-ordinating

1 . Severance and Bottin, "Work in Process Inventory Control, Through Data Base Concepts," "Management Accounting", N.Y. Jan. 1979, p. 41.

production and sales. Sales can be stimulated by liberalising credit terms which converts finished goods into receivables. Hence, effective management of finished goods is a potential source of cost reduction as well as reduction of the quantum of money needed towards working capital.

ADEQUACY AND LEVEL OF INVENTORY :

The purpose of holding various inventories by a firm are widespread as well as of various magnitude. Main are :

- (a) economy in lot purposes,
- (b) to avoid factory stoppage due to material shortage,
- (c) lengthy production time cycle,
- (d) difficulties in forecasting future demand patterns,
- (e) uneven order pattern, and
- (f) for the scale of economy.

The firms make inventory decision by balancing at the margin the benefits from holding inventories against the costs, where the benefits

are protection from 'stock-outs' while the costs include the usual; storage and interest charges. Thus, Osborn State. "This is undoubtedly the reason why some shoes stores, never bother to stock any but the most popular size of shoes, the conclude the additional inventory would have a bigger cost than the additional revenue produced."¹

The investment in inventories has been always affected by (i) the time lag between purchases and manufacture (ii) the time consumed by manufacture, and (iii) the time lag between manufacture and sale, prevailing in an business concern.² However, too much investment may result in low or even negative rate of return and too low investment may reduce the volume of business and poor service to customers. "Merchandising firms having a rapid turnover or manufacturers

1 . Osborn, Business Finance - The Management Approach, N.Y. Appleton - Century Cyafits, 1965, p. 105.

2 . Howard and Upton, Introduction to Business Finance, N.Y. McGraw Hill, 1953, pp. 211-212

with a short processing cycle will tie up less capital in inventories than will firms with low turnovers or longer processing cycles".¹

The financial manager always has a look over the above objectives before building up any group of inventories in his firm. The policy of inventory management as an important aspect of working capital management must fit in with schedules to produce a combined minimum cost of operation rather than a minimum for inventories alone.² For this the minimum optimum level of inventory is to be advance and the actual inventory must be inspired to move towards that optimal level as opposed to 'make inventories as big as possible.'

In an underdeveloped economy, problems like technological defects, labour problems and power failures are the frequent contributory

- 1 . Husband and Dockeray, Mordern Corporation Finance, Homewood Illinois, Richard D. Irwin Inc., 1966, p. 546.
- 2 . Buffa, Mordern Production Management, 4th edition, New Delhi, Wiley Eastern Ltd., 1975, p. 498.

factors for overstocking of raw materials. Likewise, long procurement lead times due to government procedural delays and uncertainties of vendor commitments have forced the maintenance of inventories of imported stores and spares, extending well over a year's value of production."¹ In Indian business concern very substantial values are frozen in dead inventories and even personnel have been assigned, in some cases at senior levels, to process their disposal, write off or salvaging, not much progress has been made in defreezing these funds.

Now the question of central issue is, how to test the hypothesis that stocks are higher than they are necessary. The probable solution might be to compare two firms producing same product of same quality with equal money outlay, which rarely exist in the real life situations.

1 Ramamoorthy, "Review of Researches on Working Capital Management in PE", Public Enterprises in India, Sankar, Mishra & Ravisanker (eds) Bombay, Himalaya Pub. House, 1983, p. 218.

Inventories involve five costs viz., material cost, cost of funds invested in inventories cost of running out of goods, carrying cost and ordering cost. The last costs are also called holding cost of inventory. Holding costs which arise with the level of inventory, a carrying costs and which fall with the rise in inventory are ordering costs. Carrying costs may include depreciation or rent of property, property taxes, insurance, handling costs, recording costs, taxes on inventory itself, pilferage fire and deterioration, obsolescence and price decline.

On the other hand, ordering costs may include costs of placing an order, unit purchases costs, production cost and opportunity costs of lost sales which either remain constant or increase less than proportionately with volume, causing declining costs per unit purchased.¹

1 . Solomon and Pringle, An Introduction to Financial Management, New Delhi, PHI, 1978, p. 212.

Thus, the financial manager is faced with the benefit of large scale procurement and the loss of heavy carrying costs at the same level of inventory in operation and is expected to minimise the risk with maximum benefit to the firm.

The situation, when the firm face the problem in converting inventories into cash either through normal or forced sales (without loss), is known as "liquidity risk". The longer the age of inventories the less will be the chance of complete realisation of value. Thus "an increasing average age overtime signifies a decreasing change of collecting the full cash value of the raw materials or finished goods through sales."¹ The liquidity risk also varies with the distance of inventories held from the cash positions. Goods in process bring raw goods one step closer to cash whereby their intrinsic liquidity is increased, but extrinsic liquidity

1. Brandt, Business Finance : A Management Approach, N.J., Prentice Hall Inc. Englewood Cliffs, 1965 p. 188.

decline being hard to push in market. Finished goods are both intrinsically and extrinsically more liquid than those of raw and semi-finished goods.

The optimum level of inventories to be held is subject to differ from firm to firm, place to place and time to time. No hard and fast rules are laid down for this purpose. However a financial manager may adjust the purchases to match with sales and to minimise the accumulation of burden some stocks of merchandise by careful and matching of sales performances. The existing inventory theory recommends the level of inventory which varies less than proportionately with sales, whereas, the classic model suggests a square root relationship. However, the industrywise studies assume three approximate limits within which inventories and usage/sales relationship move." ¹ There are :

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1. Ram Prakash, "Status and Scope of Research Studies in Management of Inventories in PEs" Shankar, Mishra and Rabishanker (eds), Public Enterprises in India, op. cit., pp. 302-303.

- (a) Inventories to move in proportion to usage/sales,
- (b) Inventories to move in an ideal situation at a square root relationship with usage/sales, and
- (c) Inventories to move at a rate in between (a) and (b).

In contrast to above, "the overall analysis of the cross section data on inventories and usage/sales relationships indicated some evidence of rationalisation in the holding of inventories, but the increase in inventories over the last twelve years did not conform to the optimal conditions determined by management scientists, scientists.¹

There always remains the scope of scheduling and controlling the inventories of a firm and the degree of success of an inventory conceives the problem, formulates its policy, and executes

1. Ibid, p. 304.

and programme.¹ Consequently, inventory decisions are more frequency based on institution rather than on logic and arithmetic and which makes its administration more difficult. At present, many businessman's deep concern over inventory policy is not that they think they are not wrong but that they do not know whether they are right or not.²

TECHNIQUES OF INVENTORY CONTROL :

A lot of techniques have been developed in the area of inventory control in modern industries. It has also been claimed that more operations research approach has been devoted in controlling inventories than to any other problems area in business and industry.³ In actual practice, the firms must stock seasonal

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1. A Synder "Principle of Inventory Management" Readings in Managerial Finance, Brigham (ed.) Hindate Illinois, Dryden Pres, 1971, p. 239.
 2. J.F. Magee, Production Planning and Inventory Control, Op. Cit., p. 8.
 3. Cohen and Robbins, Op. Cit., p. 315.

materials for the whole year and they must stock for the interim period if their procurement lead time is long enough. Hence, the guiding principle in planning the level of anticipation stocks is to minimise the combined cost of being out of stock and the costs of carrying inventory.¹ In spite of this, one must recognise that some stock outs will have to be tolerated in preference to the costs of maintaining a larger inventory while evaluating the management of inventories. Therefore, the most efficient or optimum level of inventory investment is that level at which the cost of inventory management is at a minimum.²

The management of a company is responsible for physical as well as financial control; of the inventories to be held and both of these aspects are equally contributing towards the

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1. R.W. Johnson, Financial Management, Boston, Allyn & Bacon Inc., 1966, p. 154.
 2. R.W. Johnson, Financial Management, Boston, Allyn & Bacon Inc., 1966, p. 154.

management of working capital. If a firm has thousands of separate items moving rapidly, the physical control would be more effective rather than detail written in stock records. As stated, "your written record may tell you what has been stolen but they will not prevent thefts."¹

One of the obstacles of inventory control in underdeveloped economies has been the administrative lead time. It is because most of the time is lost in inter departmental notings and correspondence, more so when the concerned official of one of the obstacles of inventory control in underdeveloped economics has been the administrative lead time. It is because most of the time is lost in inter departmental notings and correspondence, more so when the concerned official of the business concerned ministries are at logger heads.² Besides, the procurement

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1. Perkinson and Rustamji, Realities in Management Bombay, IBH Publishing Company 1981, p. 182.
 2. Om Prakash, as quoted by R.K. Mishra, Problems of Working Capital, Bombay, Somaiya Publications, 1975, p. 76.

lead time has also not declined following the insufficient or defective infrastructural facilities throughout the economy.

"Determination of the right amount of inventory requires a balancing of the costs and risks of carrying inventory against the benefits derived from having the inventory available".¹ The efficient inventory management requires to seek answers to the questions like,

- (i) How much should be ordered? and
- (ii) When should it be ordered?

The first question, how much to order, relates to the problems of determining economic order quantity (EOQ) and is answered with an analysis of costs of maintaining certain level of inventories. The second question, when to order, arises because of uncertainty and is a

1. Johnson, Op. Cit., p. 141.

problem of determining the re-order point.¹

Further, the development of sound method of classification and record keeping is the first step towards improved inventory control. Among the different techniques used by the modern management, the fundamental and simplified inventory decision techniques may be placed here :

- (i) ABC Analysis or Classification Technique
(what to control),
- (ii) Reorder point or safety stock decision
technique (when to make or buy?)
- (iii) Economic lot size or economic order
Quantity Technique (How much to make
or buy at a time?)

1. Extensive standard writings on inventory management model. For example, see Martin and Miller Op. Cit. and well known series of articles by Magee, J.F. "Guides of Inventory Policy", 1-111. Harverd Business Review, 34 (January-February, 1956, 1956), pp. 44-60 (March-April, 1956), pp. 103-116 and (May-June 1956), pp. 57-70.

This is worth mentioning here that both the material management and finished stock management may be benefitted with the application of these techniques. However, these techniques are the sub-systems of the inventory decision system as a whole. And, their partial application may erode the very purpose of the technique itself.

(a) ABC ANALYSIS :

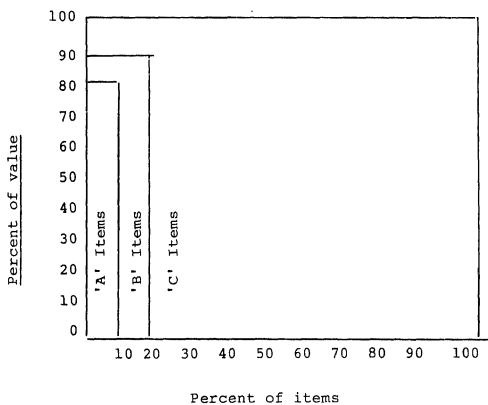
The ABC analysis is a selective inventory control method by which the value of a product can be maximised by a consideration of both on the basis of value and number of items. It is also known as Always Better Control (ABC) system of materials management. Most commonly the controllable stocks are grouped into three ABC classes.

- A. items of high value in investment but a few in numbers.
- B. items of low value in investment but abundant in number, and

C. items of low value in investment and moderate in number.

The figure 6.2 below may clarify the technique of ABC analysis.

Figure 6.2 : Distribution of Inventory Usage Values



Group	Cumulative number of items	Cumulative % in Va
A	6.2	85.9
B	25.1	97.6
C	100.0	100.0

Group A items are of 85.9 percent value though they include only 6.2 percent in total number. In management they are supposed to get maximum focus due to their cost involvement. At the other end, group C items are of 2.4 percent value though they claim 74.9 percent in number attributing minimum concern to the management. Group B items get moderate weightage in value and number as well. The grouping may be done in more than three classes but excess groups may Jeopardise the very purpose of grouping itself.

Following steps are involved in implementing the ABC plan.¹

- (i) Classifying the items of inventories determining the expected use it in units and the price per unit for each item,
- (ii) Combining the items on the basis of their relative value to form three categories A, B & C.

1. ¹ M. Pandey, Financial Management, New Delhi, Vikas Publishing House, 1981, pp. 406-407.

- (iii) determining the total cost of each item by multiplying the expected units by its price,
- (iv) ranking the items in accordance with the total cost, giving first rank to the item with highest total cost and son on,
- (v) computing the percentage of number of units of each item to total units of all items and the percentage of total cost of each item to the total cost of all items.

The ABC analysis helps the physical control over the widespread materials of an enterprise. It has been recommended that different attitudes should be adopted in inventory management - aggressive for class 'A' items, active for class 'B' items and loose for class 'C' items, and that each category should be given the attention

meet at a point after which the total costs tend to rise and that meeting point will be the EOQ and ELS. Figure 6.3 illustrates this function.

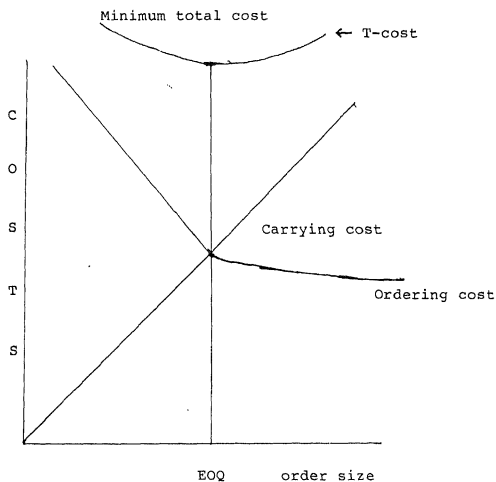


Fig. 6.3 : Economic Order Quantity Function

The figure 6.4 illustrates the functions of the sub systems like, recorder point and EQ as complementary to the inventory system as a whole.

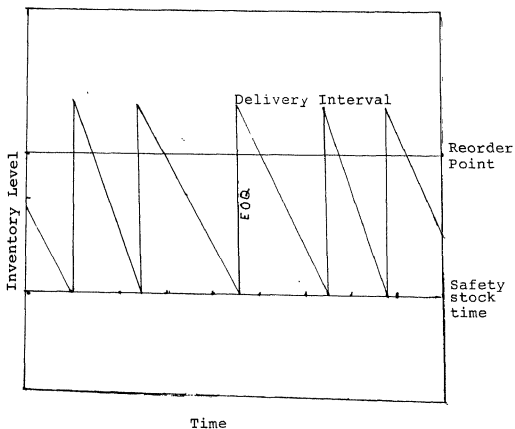


Fig. 6.4 : Inventory Management System

On the whole, the determination of the lot size by computation through formula and by graphic method or by trial and error method deduce the same result.

THE CURRENT SCENARIO :

What is the message for public sector inventory management in India following the imposition of economic sanctions by the USA and some other development countries in the wake of nuclear tests conducted at Pokhran in Rajasthan on May 11 and 13, 1998? While, in the ultimate analysis, freezing of economic aid may be a blessing in disguise for India, the immediate impact may be a (marginal) reduction in the availability of capital. This may mean an upward pressure on commercial lending rates (in contrast to the signals for a cheaper money policy through three-stage reduction in Bank Rate from 11% to 10.5% on March 18; to 10% on April 02; and to 9% on April 29, 1998). The inflation rate standing at 6.5% on May 02, 1998 (Crossing the threshold of six percent for the first time 50 weeks) may also call for curbs on money supply through isolation in interest rates. With an increase in the (administered) prices of petro-goods and other (import-linked) items, the overall inflationary spiral may rise further.

It is learnt that India will build strategic stocks of imported crude oil to insulate it from future exigencies of war and price volatility

of petroleum products. According to a document referred to by Reuters, India aims at strategic crude stock of 12.55 million tonnes, enough for keeping its refineries in operation for 45 days. The documents prepared by the Oil Corporation Committee has, reportedly, called for an initial strategic cover of 4.25 million tones of imported crude oil as contingent supply for 15 days. The total cost of the project, including crude imports, has been pegged at Rs. 8718 crore. Even if these costs are recovered through a levy on petroleum products, a higher initial demand for working capital with grater investment in inventories, along with the higher inflation-potential of such a policy, cannot be denied. Since many of the big PSUs are in the oil sector, what happens here affects the Indian economy as a whole in a big way.

An obvious solution is to cut down "administrative lead time" and all conceivable bottlenecks on the supply route. But the practical possibility of a "Zero-inventory level" or "just-in-time (JIT)" is much too remote even in those lines which have little linkage with

imports.* As a safeguard against panicky situations, even the public distribution system may be called upon to maintain stocks of food and other essential commodities at fairly high levels. The private sector, too, may feel like having strategic augmentation in the levels of creation in inventories, notwithstanding an increase in interest rates and other costs of inventory maintenance.

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INVENTORY VALUATION OF IFFCO PHULPUR UNIT:

- i) Raw Materials : Packing materials and construction materials are valued at cost.
- ii) Stock in Progress is valued at cost.
- iii) Stores and Spares are valued at cost.
Item of stores and spares which are slow or non-moving are valued at lower of cost or realisable value based on technical estimates.
- iv) Finished goods are valued at lower of cost or net realisable value. Damaged stock as identified by the management are valued at their estimated realisable value.
- v) Stocks of imported fertilisers are valued at lower of selling price or procurement cost plus handling charges less remuneration received from the Government of India.
- vi) Stock of seed and chemicals are valued at lower of cost or estimated realisable value.

vii) Tools issued are written off over a period of three years.

viii) Catalysts and Resin issued at the time of commissioning the plant are capitalised. Subsequent issues are charged to seven on the basis of their estimated life.

INVENTORY MANAGEMENT IN IFFCO PHULPUR UNIT :

The size of inventory may cause to vary from undertaking to undertaking and from time to time. In USA inventories have varied between 42 and 48 percent of working capital in a certain time period.¹ The following table shows the inventories of Phulpur Unit.

TABLE - 6.1

INVENTORIES OF IFFCO PHULPUR UNIT

Year	Rupees (in Lakhs)
1986-87	4,320
1987-88	2,304
1989-90	3,104
1990-91	4,631
1991-92	4,860
1992-93	4,447
1993-94	1,904
1994-95	10,959
1995-96	17,385
1996-97	7,423

1. Husband and Dockeray, Mordern Corporation Finance, Op. Cit., p. 545.

The analysis on Inventory of IFFCO in table No. 6.1, it is clarifies the inventory have increased only from Rs. 4,320 lakhs in the year 1986-87 to Rs. 7,423 lakhs in the year 1996-97 with a sudden increase of the Rs. 17,385 lakhs in the year 1995-96. Inventories of Phulpur Unit is decreasing from 1987-89. After 1987-89 inventories increased in coming years slowly. After analysing the table No. 6.1 we can say that inventories are very sound over all years receipts 1986-87 to 1996-97.

TABLE 6.2
INVENTORY OF FINISHED GOODS OF PHULPUR UNIT
(Rs. in Lakhs)

Year	Inventory	Ratio
1986-87	4,320	54.72
1987-89	2,304	50.04
1989-90	3,104	39.60
1990-91	4,637	21.96
1991-92	4,860	14.88
1992-93	4,447	26.16
1993-94	1,904	20.88
1994-95	10,959	24.84
1995-96	17,385	34.48
1996-97	7,423	26.28

Sources: Compiled from various Annual Reports of Relevant Years of IFFCO.

The analysis on inventory and finished goods of IFFCO in table No. 6.2, it is clarifies the inventories have increased only from Rs. 4320 lakhs in the year 1986-87 to Rs. 7423 lakhs in the year 1996-97 with a sudden increase of the Rs. 17385 lakhs in the year 1995-96. Inventories of Phulpur unit is decreasing from 1987-89. After 1987-89 inventories increased incoming years slowly. After analysing the table No. 6.2 we can say that inventories are very sound over all years receipts 1986-87 to 1996-97.

Accordingly the finished goods ratio of IFFCO has been found to highest i.e. 54.72 in the year 1986-87. Against the lowest finished goods ratio of 14.88 in the year 1991-92. During the year 1987-89 the ratio was 50.04 which has decreased regularly upto 1991-92. But since 1992-93 has against started increasing from 20.88 and 24.84 during the year 1993-94 and 1994-95. In the comparision of 1986-87 to 1992-93 the ratio was 54.72 and 26.16, it is decrease 100 percent of the ratio which is maintained in the end of the year 1996-97.

TABLE 6.3INVENTORY OF FINISHED GOODS (MONTHS SALE)

Year	Inventory	Ratio
1986-87	4,320	4.56
1987-89	2,304	4.17
1989-90	3,104	3.30
1990-91	4,637	1.83
1991-92	4,860	1.24
1992-93	4,447	2.18
1993-94	1,904	1.74
1994-95	10,959	2.07
1995-96	17,385	2.84
1996-97	7,423	2.19

Sources: Compiled from various Annual Reports of relevant years of IFFCO.

The analysis worked out in table 6.3 indicates that the comparative study of inventory of finished goods (month sale) and Ratio of IFFCO. Accordingly the finished goods ratio of IFFCO has been found to highest i.e. 4.56 in the year 1986-87. Against the lowest finished goods ratio of 1.24 in the year 1991-92. During the year 1987-89 the ratio was 4.17 which has decreased regularly upto 1991-92. But since 1992-93 has against started increasing from 1.74 and 2.07 during the year 1993-94 and 1994-95. In the comparision of 1986-87 to 1992-93 the ratio was 2.18 and 4.56, it is decrease 100 percent of the ratio which is maintained in the end of the year 1996-97.

Accordingly the inventory of IFFCO have increased only from Rs. 4320 lakhs in the year 1986-87 to Rs. 7423 lakhs in the year 1996-97 with a sudden increase of the Rs. 17,385 lakhs in the year 1995-96. Inventories of Phulpur Unit is decreasing from 1987-89. After 1987-89

inventories increased incoming years slowly.

After analysing the table No. 6.3, we can say that inventories are very sound over all years receipts 1986-87 to 1996-97.

SCHEDULE 9

INVENTORIES AS ON 31.03.1997 AT PHULPUR UNIT

(Rs. in Lakhs)

	At at 31.03.97	As at 31.03.96
<u>Inventories :</u>		
(As taken, valued and certified by the Management including Goods in Transit Rs. 4,835.99 lakhs) (Provisions year Rs. 4,786.62 lakhs)		
Raw Materials	7,687.42	12,550.26
Stores & Spares	22,197.37	18,286.10
Loose Tools	133.22	78.40
Chemicals & Catalysts	2,949.19	1,951.79
Packing Materials	1,132.07	735.52
Construction Materials	1,235.01	1,626.16
Stock in Process	105.52	-
Finished Goods	27,555.21	35,639.73
	<u>62,995.01</u>	<u>70,867.96</u>
Less: Provision for slow Non Moving Stores	-	450.00
TOTAL :	<u>62,995.01</u>	<u>70,417.96</u>

After analysing the table of 6.4 we can say that inventories of Phulpur Unit is decreasing from March 1996 to March 1997 and construction materials and finished goods is also decreasing. But stores and spares loose tools 1996 to chemicals and catalysts are increasing from March 1996 to March 1997. At last it may be stated that inventories are quite sound over all the years during March 1996 to March 1997.

CHAPTER - VII

ACCOUNTS RECEIVABLE
MANAGEMENT

CHAPTER - 7

ACCOUNTS RECEIVABLE MANAGEMENT

Trade credit is the most important ^{feature} of the modern business. It is considered as an essential marketing tool, acting as a bridge for the movement of goods through production and distribution stages to customers finally. A firm grants trade credit to protect its sales from the competitors and to attract the potential customers to buy its products at favourable terms. When the firm sells its products or services and does not receive cash for it immediately, the firm is said to have granted trade credit to customers. Trade credit, thus, creates receivables or book debts which the firm is expected to collect in the near future. The book debts or receivables arising out of credit has three characteristics.¹ First, it involves an element of risk which should be carefully analysed. Cash sale are totally riskless, but not the credit sales as the cash payment has yet to be received. Second, it is based on economic value. To the buyer, the economic value in goods or services passes immediately

1. Ramamoorthy, Y.E. Working Capital Management. Madras Institute for Financial Management and Research, 1976, p. 183.

at the time of sale, while the seller expects an equipment value to be received later on. Third, it implies futurity. The cash payment for goods or services received by the buyer will be made by him in a future period. The customers from whom receivables or book debts have to be collected in future are called trade debtors or simply as debtors and represent the firm's claim on assets.

Receivables constitute a substantial portion of current assets of several firms. For example, in India, trade debtors after inventories, are the major components of current assets. They form about one third of current assets in India. Granting credit and creating debtors amount to the blocking of the firm's funds. The interval between the date of sale and the date of payment has to be financed out of working capital. This necessitates the firm to get funds from banks or other sources. Thus, trade debtors represent investment. As substantial amounts are tied up in trade debtors, it needs careful analysis and proper management. Receivables are a step nearer to cash than those of inventories and are arrived at only after the finished stock, is sold to

the customers. Investment in receivables is function of credit sales. Collection policies and cash discounts. Thus receivables form a major component of current assets and thereby of working capital as well.

RECEIVABLES CONCEPT :

The pertinent question at this stage may be ~~Why~~ receivables are created. The overall objective of a business concern rests on its profitabilities which is achieved with the expansion of its sales to a fairly large size. A substantial part of sales is stimulated by credit sales which has a great enthusiasm of earning profits.

For different parties trade credit shows up differently on the books. The grantor's credit takes the form of an account receivable from his customers, while the recipient's books will show the same amount as an account payables."¹ Here, trade credit is taken from the side of grantor.

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1. Christy and Roden, Finance : Environment and Decision, N.Y. Harper International Edition, 1976, p. 293.

The term 'receivable' has been defined "as debt owed to the firm by customers arising from the sale of goods or service in the ordinary course of business."¹ "Policies concerning the management of accounts receivable again involve us in the dilemma of liquidity versus profitability. To the extent that we extend lenient credit terms we tie up funds in receivables and Jeopardise our own ability to pay bills. But we also make easier to sell our product and (hopefully) improve our profits."² Hence, the management of Accounts Receivable (AR) is primarily concerned with the trade off between the profits from increased sales generated by credit policies and the costs implementing such policies.

The position of receivables depends upon the state of capital market and credit habits in the economy. In developed economy like that of United States, where bills are greatly used and transactions mostly take place on credit receivables assets.³ Apparently, receivables

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1. O.M. Joy, as quoted by Khan and Jain, Financial Management, New Delhi, Tata McGraw Hill Publishing Company, 1983, p. 693.
 2. W.R. Johnson, Financial Management, Boston, Allyn & Bacon Inc. 1966, p. 120.
 3. S.C. Jain, The Economic Times, New Delhi,

outstanding at a point of time throw considerable light on the efficiency of credit administration. Prompt collection reduces receivables to the minimum thereby optimising their investment. Receivable's, therefore, render an indirect service in optimising working capital.

In an organisation, both sales and credit departments deserve responsibility for the creation of and collection from receivables. The sales department can help through cautions and intelligent selection of risk and appropriate collection policy as well.¹ Receivable of a firm must flow into cash at a predetermined rate if the firm is to have cash to pay debts and to maintain its profitability. The promptness in payment is important because credit requires financing which is costly, while lengthening delays in payment are a sign of doubtful or bad debts.² Some people have also suggested that firm should enforce upon its sales department strictly the principle that sales are incomplete

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1. Howard and Upton, Introduction to Business Finance, NY, McGraw Hill Book Co., 1953, p. 210.
 2. Franks & Scholefield, Corporate Financial Management, U.K., Grower Pres, 1974, p. 20.

until the value thereof is realised. Only selling on credit is not the end of their Job but they must take responsibility even in collecting the receivables occurred due to the previous credit sales.¹ Nonetheless, the organisations with both sales and credit departments have to maintain a close and objective coordination between these two departments regarding the credit management which otherwise may prevent to achieve the objectives of the firm. Fig. 7.1 reveals the purpose of maintaining receivables in a business concern.

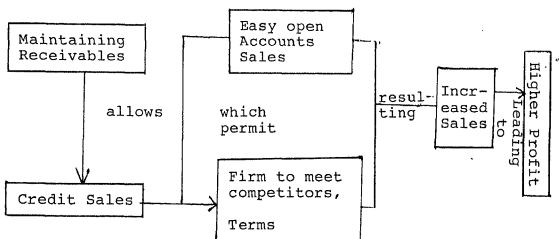


Fig. 7.1 : Flow chart showing the purpose of Maintaining Receivables.

7.1 COSTS AND BENEFITS OF HOLDING RECEIVABLES:

The objectives of accounts receivable policy is to promote sales and profits until

1. Institute of Chartered Accountants as quoted by R.K. Mishra. Problems of Working Capital, Bombay, Somaiya Publications, 1975, p. 95.

that point is reached where the return on investment in the future finding of receivables is less than the cost of capital.¹ The business which grants credit to its customers is obliged to finance not only its own inventory but also the goods which it has put on the shelves of its customers.² The costs associated with receivables may be grouped under four heads as under.

(i) Collection Costs :

These costs include the normal administrative charges for collection procedure. These also include the expenses of credit department and expenses involved in acquiring credit informations.

(ii) Default Costs :

These costs are created by the failure of customer to pay his debt. Such debts are named as 'bad-debts' and have to be written off as unrealised loss.

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1. Bolten, Managerial Finance - Principles and Practice, Houghton Mifflin Co., 1976, p. 446.
 2. Guthmann and Dougall, Corporate Financial Policy, NY, Prentice Hall Inc., 1955, p. 394.

(iii) Delinquency Costs :

Such costs arise if the customer fails to meet his obligation in due date after the expiry of the credit period. These costs include blockage of funds for extended period and costs associated with the collection efforts of such overdue legal charges and so on.

(iv) Capital Costs :

These costs include the interest charges payable to the creditors (or inventors) of the firm, who have financed the sum which is invested to the customers of the firm as accounts receivable. The firms not selling on credit have not to provide for such costs of capital.

All these are the costs associated with credit sales and the firms selling only in cash are not supposed to incur.

Receivables may be in the form of open accounts, promissory note and bills of exchange and there is always a chance of bad debt in every case. Therefore, an efforts should be made to hold the loss within a certain range and then to prepare for the inevitable by making an allowance or establishing a reserve for bad debt losses. The size of probable bad debt loss is fixed on

the past experience basis. However, 'the cost of credit mistakes is not measured by bad debts alone by the trouble and expense of collection efforts and litigation in the case of accounts that ultimately are collectible.'

The objective of the investment in receivables by a firm must be to have a surplus after deducting the costs incurred thereof. Credit is allowed to push the sales up which will leave a higher margin of profit. As stated, "trade credit to customers is justified only to the extent that a firm's profits are improved by selling on terms rather than for cash only. This means that the marginal return for granting trade credit must exceed its marginal cost." Thus credit in itself is utilised to increase sales, but sales must return a profit.

ANALYSIS OF COST :

There are three types of cost involved:

(i) Production and selling costs :

These costs increase with expansion in sales. If sales expand within the existing production capacity, then only the variable production and selling costs will increase. If capacity is added for sales expansion resulting from loosening of credit policy, then the incremental production and selling costs will include both variable and fixed costs. The difference between incremental sales revenue

(SALES) and the incremental production and selling costs (COST) is the incremental contribution (CONT) of the change in the credit policy. Note that the tight credit policy means rejection of certain types of accounts whose creditworthiness is doubtful.

(ii) Administration costs :

Two types of administration costs are involved when the firm loosens its credit policy :
(a) credit investigation and supervision costs and (b) collection costs. The firm is required to large number of accounts when it loosens its credit policy. Similarly, the firm will have to intensify its collection efforts to be able to collect outstanding bills from financially less sound customers.

(iii) Bad-debt losses :

Bad-debt losses arise when the firm is unable to collect its accounts receivables. The size of bad-debt losses depends on the quality of accounts accepted by the firm. The firm tends to sell to customers with relatively less credit standing when it loosens its credit policy. Some of these customers delay payments, and some of them do not pay at all. As a result, bad debt losses increase. The firm can certainly avoid or minimise bad-debt losses by adopting very

light credit policy. Is minimisation of bad-debt losses a goal of credit policy? If it was so, no firm will ever sell on credit to anyone. If this happens, then the firm is not availing the opportunity of using credit policy as a marketing tool for expanding sales, and will incur opportunity cost in terms of lost contribution.

CREDIT PROCEDURES FOR INDIVIDUAL ACCOUNTS:

"Financial managers should be considered more with preventing losses than with adjusting to them after they occur." The credit evaluation procedure of the individual accounts should involve the following steps: (1) credit information (2) credit investigation (3) credit analysis (4) credit limits and (5) collection procedure.

Credit Information :

In extending credit to customers the firm would ensure that receivables are collected in full and on the due date.

Little progress has been in our country in the matter of developing the sources of credit information in the name of secrecy and confidentiality. A number of sources of credit information exist in advanced countries. Efforts should be made to develop such sources in our country. This will facilitate the effective management of credit.

The decision to grant credit cannot be delayed for long because of the time involved in collecting the credit information. Depending on these two factors of time and cost, any, or a combination of the following sources may be employed to collect the information.

Financial Statement :

One of the easiest ways to obtain information regarding the financial condition and performance of the prospective customer is to scrutinise his financial statement - balance sheet and the profit and loss account. There is no difficulty in obtaining the published financial statement of Companies. The real difficulty arises in obtaining the financial statement from partnership firms or individuals, particularly the audited accounts since they do not have legal obligation to audit their accounts. There is frequently correlation between a company's refusal to a statement and weaknesses in its financial position.¹ If possible, additional information

1. Van Horne, James C., Financial Management and Policy India, Prentice Hall of India, Pvt. Ltd., 1975, p. 454.

should be sought from firms that have seasonal sales. The credit granting firm should always insist on the audited financial statements.

BANK REFERENCES :

Another source of collecting credit information is the bank where the customer maintains his accounts. In advanced countries like USA many banks have large credit departments which can provide the detailed credit information. Generally, these banks may not provide the detailed credit information through its bank. More information from other sources may be collected to supplement it.

TRADE REFERENCES :

The firm can ask the prospective customer to give trade references. The firm may insist to give the names of such persons or firms with whom the customer has current dealings. This is a useful source to obtain credit information at on cost. A customer can furnish misleading references. To guard against this, the honesty and seriousness of the referee should be examined. The firm can insist on furnishing the references of the people or firms of repute.

CREDIT BUREAU REPORTS :

The two sources of credit information - bank reference - can be biased. The customer may furnish the trade references of only those parties with whom he has good commercial relations. In India also the urgent need for such organisations. To begin with, the various trade associations and chambers of commerce can be developed to provide the useful credit information to their members.

CREDIT INVESTIGATION :

After having obtained the credit information the firm will get an idea regarding the matters which should be further investigated. The factors that affect the extent and nature of credit investigation are¹

1. The type of customers, whether new or existing.
2. The customer's business line, background and the related trade risks.
3. The nature of the product perishable or seasonal.

1. Ramamoorthy, Op. Cit., p. 195.

4. Size of customer's order and expected further volumes of business with him.
5. Company's credit policies and practices.

A comprehensive and meaningful investigation can be carried only when adequate data are available. The data should be promptly gathered. Unnecessary delay in responding to the customer's request can prove to be detrimental. The customer can be directly approached to provide information about himself. Another way to investigate the creditworthiness of the customer can be to examine his financial statements of last three-four years.

Detailed investigation may be conducted by 'discriminant analysis' distinguishing between bad and good accounts through acid test ratio, firm - size, and account payable period. Further, in 'credit rating system' selection criteria are set on the basis of age, marital status, income group, net worth, house ownership and so on about the credit applicant. A matter of fact, "the objective of credit policy is to maximise sales, and just as clearly it is not to minimise bad debt expense. To maximise sales, the firm

would sell to no one."¹

Besides appraising the financial strength of the applicant, the analyst should also consider the quality of management and the nature of the applicant's business. 'The analyst has to be alert to spot instances of imbalance in management of customer's business, marked by over - centralisation of responsibilities and authority, over trading, shrinking margins and growing liabilities. While business failures can be attributed to a large variety of factors, the central factor is management incompetence.²

The decision to extend credit to the customer will basically depend upon the judgement of the credit analyst, although numerical credit evaluation system exist to determine the ability of the customer to service debt.³ More and more use of the quantitative techniques for the evaluation of credit applicants is expected in

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1. Solomon and Pringle, Op. Cit., p. 205.
 2. Ramamoorthy, Op. Cit., p. 196-97.
 3. See, Myers, James H. and F.W. Forgy. "The Development of Numerical Credit Evaluations" Journal of American Statistical Association, 58 (September, 1963), pp. 799-806.

future with a fast growth of trade credit and companies and with a difficulty in finding out competent credit analysis.

SIZE OF RECEIVABLES :

The level of accounts receivable is a function of the volume of sales, the credit terms, the riskiness of the individual credit customer and seasonal influences.¹ Further depending on the estimated increase in net revenue, a company is willing to add progressively riskier accounts until the expected losses from those that prove to be uncollectible become excessive.² In short run when credit sales increase, the investment also decreases.

Accounts and notes receivable form a fairly large size in corporations except in public utilities. "In 1975 the typical manufacturing firm had approximately 21 percent of its assets invested in receivable, and another 21 percent in inventories."³

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1. Michael Firth, Management of Working Capital, London, The Mac Millan Press, 1976, p. 53.
 2. Osborn, Business Finance - The Management Approach, NY, USA, Apleton Century Coofits, 1965, p. 90.
 3. Brigham, Financial Management - Theory and Practice, Hinsdale Illinois, The Dryden Press, 1977, p. 250.

The investment in receivables may be guided by volume of credit sales and the length of time between sales and collection. In turn, level of credit sales is the function of (i) size of the firm (ii) product cost, durability of the product etc (iii) firm's financial resources and (iv) role of the competitors. On the other hand, length of time between sales and collection is decided by (i) firm's credit standards, (ii) credit period (iii) discounts given, and (iv) collection efficiency of the firm.

The structure of receivables includes (i) sundry debtors, which are the functions of credit sales, and (ii) loans and advances, which includes, advances to contractors, advances to suppliers, deposits with authorities, prepaid expenses etc.

FACTORING RECEIVABLES :

The outbreak of the factoring service took place about 150 years ago when the European textile was sold in American markets by some professional traders. They themselves assumed the dealership of the customers purchasing those textiles on credit. Thus they performed

their job in two ways, selling textile and guaranteeing the payment of debt extended to the purchases. Now, there are many factoring companies in addition to some commercial banks, doing this job in Europe and America. In turn, the underdeveloped countries are still lacking the business concern having the function of a 'factor'.¹ This has stated only recent in India.

"In the early stage of their history factors were itinerant merchants who were entrusted with merchandise belonging to others. They were the 'middlemen' between countries with a fairly advanced economy and the countries which were still in primitive stages of development."² Recently, factoring has become much more than a method of financing for in performs a combination of basic service which cannot be obtained from any other sources. By factoring the business is supplied with funds in peak seasons without any collection and repayment problem in future. This is a kind of insurance by the agent (factor) over the amount invested in receivables by its principal (the seller) where former assures the later that his

1. R.K. Mishra, Op. Cit., p. 213.

2. Bradley, Fundamentals of Corporation Finance, NY, Rinehart & Company Inc., 1959, p. 114.

accounts will continue to be converted into cash. But the 'accounts receivable insurance' supplements the activities of the credit departments rather to replace them.¹ Further, when management takes extraordinary measures to accelerate the flow of receivables into cash, this action is not necessarily a sign of weakness. In many cases, the sale of receivables is 'a sound financial management.'²

Factoring is a popular mechanism of managing, financing and collecting receivables in developed countries like U.S.A. and U.K. and has extended to a number of other countries in recent past. Factoring has been just introduced in India. Subsidiaries of four banks - State Bank of India, Canara Bank, Punjab National Bank and Allahabad Banks - have been formed to provide factoring services. In this section, we explain the nature and types of factoring services and its costs and benefits.

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1. Ibid, p. 125.
 2. C.G. Moore, "Factoring ... Service", The Business Lawyer (Ap. 1939), reprinted in Elements of Financial Administration of India, PHI, 1964, p. 101.

NATURE OF FACTORING :

Factoring is a unique financial innovation. It is both a financial as well as a management support to a client. It is a method of converting a non-productive, inactive assets (i.e. book debts) into a productive assets (viz. cash) by selling book debts (receivables) to a company that specialises in their collection and administration.¹

The term factor has its origin in the Latin word 'facere' meaning to make or do or to get things done. Originally, factors acted as selling agents. They facilitated the flow of merchandise from the manufacturers to customers. The function of a factor include finding out customers for the manufacturer's products, stock his goods sell them and finally collect sales proceeds and remit them to the manufacturer. Thus, the function of factors of olden days included stocking, marketing and distribution as well as administration and financing of credit. The modern factor has specialised in credit collection and financial services, leaving the marketing and distribution functions to the manufacturer.

1. Westlake, M., Factoring, Pitman, 1975, p. 1.

One can define factoring as a business involving a continuing legal relationship between a financial institution (the "factor") and a business concern (the "client") selling goods or providing services to trade customers (the "customers") whereby the factor purchases the client's book debts (account receivable) and in relation thereto controls the credit, extended to customers and administers the sales ledger.¹ Factoring may also define as 'a contract between the suppliers of goods/services and the factor under which (a) the supplier and its customers (debtors) other than those for the sale of goods bought primarily for their personal, family or household use; (b) the factor is to perform at least two of the following functions - (i) finance for the supplier, including loans and advance payments, (ii) maintenance of accounts (ledgering relating to the receivables), (iii) collection of accounts (ledgering relating to the receivables) and (iv) protection against default in payment by debtors (c) notice of assignment of the receivables is to be given to debtor.²

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1. Biscoe, P.N. Law and Practice of Credit Factoring, Butterworth & Company, 1975, p.5.
 2. Definition given by the Unidroit Convention on International Factoring Held in Ottawa, Canada, May 1988, quoted in the Reserve Bank of India, Report of the study group for Examining Introduction of Factoring Service in India, RBI, Dec. 1988, pp. 44-45.

The modern business concern enterprises are seeking more and more risk averse situations by minimising the uncertainty in future events, where factoring is one of the tools though this has not yet been developed properly throughout the world. In turn, the company that requires a constant flow of working capital and which cannot obtain this by waiting the usual length of time, based upon its terms, to receive trade payments, is factorable.¹

FACTORING SERVICES :

While purchases of book debts is fundamental to the functioning of factoring, the factor provides the following three basic services to clients.¹

1. Sales ledger administration and credit management.
2. Credit collection and protection against default and bad debt losses.
3. Financial accomodation against the assigned bad debts.

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1. A.B. Abraham, "Factoring - The New Frontiers For Commercial Banks" in Aby & Voughn (ed), Financial Management Classics, California, Good Year Pub. Company, 1979, p. 124.
 1. For a detailed discussions, Philips C.W., The Role of Factoring Commercial Credit Company, 1956, pp. 17-47.

A factor provides full credit administration services to his clients. Customers of "clients" become debtors of a factors and have to pay to him directly in order to settle their obligations. Factoring thus involves an outright purchases of debts allowing full credit protection against any bad debts and providing financial accommodation against the firm's book debts. In U.S.A. the maximum advance a factor provides is equal to the amount of factored receivables less the sum of (i) the factoring commission (ii) interest on advance, and (iii) reserve that the factor requires to cover bad debts losses. The amount of reserve depends on the quality of factored receivables and usually ranges between 5 to 20 per cent in U.S.A.

In developed countries like U.S.A. factors provide many other services. They include (i) providing information on prospective buyers; (ii) providing financial counselling, (iii) assisting the client in managing its liquidity and preventing sickness (iv) financing acquisition of inventories (v) providing facilities for opening letters of credit by the client etc.¹

1. Reserve Bank of India (R.B.I.), Report of the Study Group for Examining the Introduction of Factoring Service in India, Bombay: Reserve Bank of India, 1988, p. 17.

FACTORING Vs. SHORT-TERM FINANCING :

Although factoring provides short term financial accommodation to the client, it differs from other type of short term credit in the following manner.¹

1. Factoring involves 'sale' of book debts. Thus the client obtains advance cash against the expected debt collection and does not incur a debt.
2. Factoring provides flexibility as regards credit facility to the client. He can obtain cash either immediately or on due date or from time to time, as and when he needs cash. Such flexibility is not available from formal sources of credit.
3. Factoring is a unique mechanism which not only provides credit to the client but also undertakes the total management of client's book debt."

1. Gupta, G.P. et al., Factoring - An Innovative Financial Service for Small Scale Sector (Internal Document). Industrial Development Bank of India, August, 1985.

FACTORING Vs. BILL DISCOUNTING :

Factoring should be distinguished from bill discounting. Bill discounting or invoice discounting consists of the client drawing bills of exchange for goods and services provided on buyers, and when discounted it with banks for a charge. Thus, like factoring, bill discounting is a method of financing. However, it falls short of factoring in many respects. Factoring is all of bills discounting plus much more. Bills discounting has the following limitations in comparison of factoring :

- (a) Bills of discounting is a sort of borrowing while factoring is the efficient and specialised management of book debts along with enhancing the client's liquidity.
- (b) The client has to undertake the collection of book debts. Bill discounting and always "with recourse", and as such the client is not protected from bad debts.
- (c) Bills discounting is not a convenient method for companies having large number of buyers with small amount since it is quite inconvenient to draw a large number of bills.

COSTS AND BENEFITS OF FACTORING :

There are two type of costs involved :

- # the factoring commission or service fee.
- # the interest on advance, granted by the factor to the firm.

Factoring commission is paid for credit evaluation and collecting and other services and to cover bad-debts losses. It is usually expressed as a percentage of full net face value of receivables factored and in advance like U.S.A. ranges between 1 to 3 per cent. In India, a changes of amount 2.5 to 3 per cent and envisaged though the full economics is yet to be worked out by the newly founded factoring organisations.¹ In fact, the factoring commission will depend on the total volume of receivables, the size of individual receivables, and the quality of receivables. The commission is expected to be higher for "without recourse" factoring since the factor assumes the entire credit risk. However, in the opinion of experts, factors should not charge more than what the banks are charging since they would be in competition with them as regards the financing of receivables.²

1. R.B.I. Op. Cit., p. 111.

2. Ibid.

If factoring is so expensive, why should firms go for it? There are certain benefits which result from factoring the receivables and they more than offset the costs of factoring. Factoring results with the following benefits :

1. Factoring provides specialised service in credit, management and thus, helps the firm's management to concentrate on manufacturing and marketing.
2. Factoring helps the firm to save cost of credit administration due to the scale of economics and specialisation.

Many firms are often started by technical or marketing entrepreneurs, and they may fail or may lack expertise to provide adequate attention to credit control and financial management. Thus the management time is released to focus on technology, production, marketing, personnel and other managerial functions.

Thus factoring involves both costs and benefits. A firm should evaluate costs and benefits to arrive at a decision regarding the employment of a factor.

Let us consider an example to illustrate the trade-off between costs and benefits of factoring. A small firm has a total credit sales of Rs. 80 lakh and its average collection period is 80 days. The past experience indicate that bad debt losses are around 1 per cent of credit sales. The firm spends about Rs. 1,20,000 per annum on administrating its credit sales. This cost includes salaries of one officer and two clerks who handle credit checking, collection etc. telephone and telex charges. These are avoidable costs. A factor is prepared to buy the firm's receivables. He will charge 2 per cent commission. He will also pay advance against receivables to the firm at an interest rate of 18 per cent after withholding 10 per cent as reserve. What should the firm do? Understanding of costs etc. The client should understand that the factor can function efficiently with his full cooperation. For example, it is not possible for a factor to resolve all dispute arising between the client and the factor, particularly those which are technical in nature. Similarly, a conflict may arise between the client and the factor as regards the question of credit risk. The factor may like to reduce or enhance credit limit to customers depending on his assessment of the

credit risk which the client may not agree with. Factoring benefits the client, but the overall benefits in the long run occur from the good management of producing and marketing operation. Factoring, by ensuring the credit collection, helps the firm to concentrate on production and marketing.

TABLE - 7.1ACCOUNTS RECEIVABLE OF IFFCO (1986-1997)

(Amount in Lakhs)

Year	Receivable (Debtors)
1986-87	874
1987-89	4485
1989-90	4306
1990-91	6245
1991-92	3902
1992-93	97
1993-94	1141
1994-95	5032
1995-96	9435
1996-97	3862

Source : Compiled from various Annual Reports
of relevant years of IFFCO.

The analysis worked out in table No. 7.1 indicates that the total account receivable from available from all the sources of IFFCO. Accounts receivable funds were Rs. 874 lakhs in the year 1986-87 which arose to Rs. 3862 lakhs in the year 1996-97. The highest amount of account receivables was Rs. 9435 lakhs in the year 1995-96 and the lowest amount was only Rs. 97 lakhs in the year 1992-93 which had increased in the year 1987-89, 1989-90, 1990-91 in Rs. 4485 lakhs, Rs. 4306 lakhs and Rs. 6245 lakhs. But it had decreased during the year 1991-92 and 1993-94 respectively. The amount of accounts receivables Rs. 3902 lakhs and Rs. 1141 lakhs. But the comparison the same 1995-96 to 1986-87, we found that account receivable increased 'tremendously'.

A Study of Accounts Receivables & Current Assets of IFFCO

(Rs. in Lakhs)

CHART No. 7.2

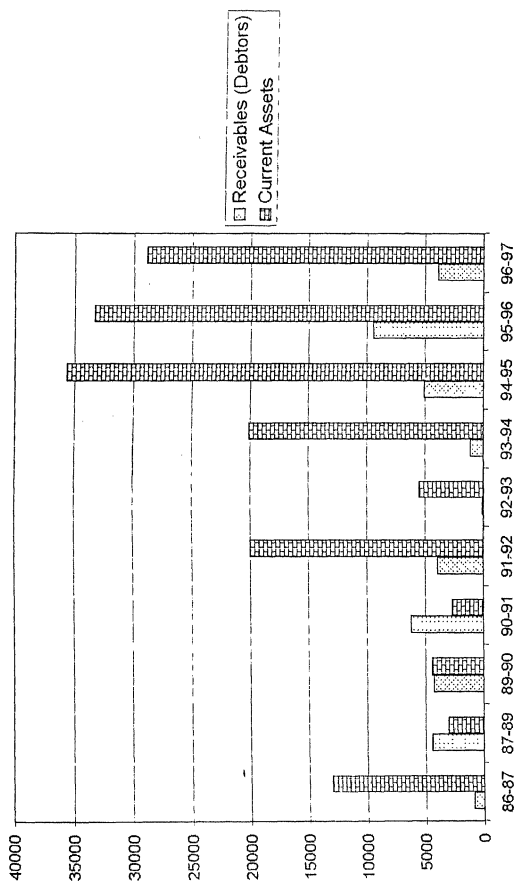


TABLE 7.2A COMPARATIVE STUDY OF ACCOUNTS RECEIVABLE ANDCURRENT ASSETS

		(Rs. in Lakhs)
Year	Receivable (Debtos)	Current Assets
1986-87	875	13,007
1987-89	4,485	3,005
1989-90	4,306	4,430
1990-91	6,245	2,720
1991-92	3,902	19,969
1992-93	97	5,522
1993-94	1,141	20,048
1994-95	5,032	35,629
1995-96	9,435	33,285
1996-97	3,862	28,851

Source : Compiled from various Annual Reports of
relevant years of IFFCO.

The analysis worked out in table No. 7.2 indicates that the comparative study of account receivable and current assets of IFFCO. Accounts receivable funds were Rs. 874 lakhs in the year 1986-87 which arose to Rs. 3862 lakhs in the year 1996-97. The highest amount of account receivable was Rs. 9435 lakhs in the year 1995-96 and the lowest amount was only Rs. 97 lakhs in the year 1992-93 which had increased in the year 1987-89, 1989-90, 1990-91 in Rs. 4485 lakhs, Rs. 4306 lakhs and Rs. 6245 lakhs, but it had decreased during the year 1991-92, and 1993-94 respectively. The amount of account receivables Rs. 3902 lakhs and Rs. 1141 lakhs. But the comparison the 1995-96 to 1986-87, we found that account receivable increased 'tremendously'.

After the analysis of the table 7.2, it is quite clear that the current assets of IFFCO Phulpur Unit that the current assets of IFFCO Phulpur Unit has been increased from

Rs. 13007 lakhs, 1986-87 to Rs. 28751 lakhs in 1996-97. The highest amount of current assets is Rs. 35,629 lakhs in 1994-95 and lowest are Rs. 3005 lakhs in 1987-89. But decreased upto amount of Rs. 2720 lakhs in the year 1990-91.

It has also been illustrated chart No. 7.2 to clarified the position well.

A Comparative Study of Account Receivable & Working Capital of IFFCO

(Rs. in Lakhs.)

CHART No. 3

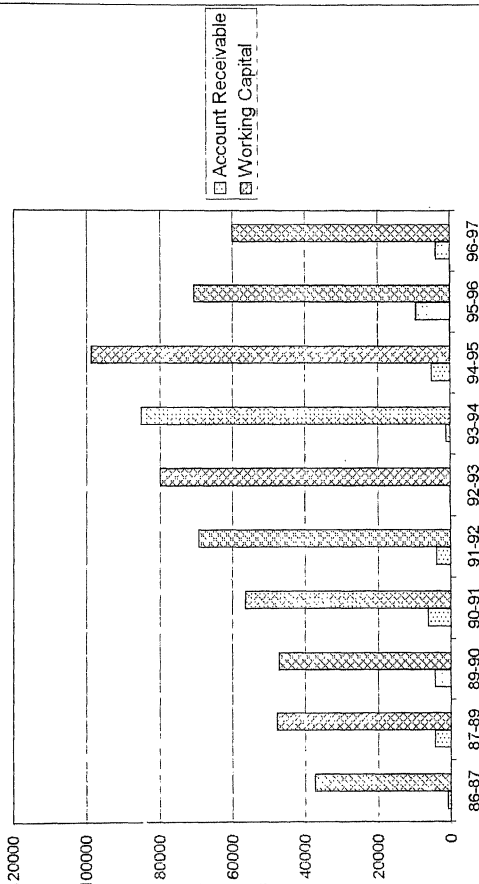


TABLE 7.3

A COMPARATIVE STUDY OF ACCOUNT RECEIVABLES AND
WORKING CAPITAL

(Rs. in Lakhs)		
Year	Accounts Receivable	Working Capital
1986-87	874	37,287
1987-89	4,485	47,773
1989-90	4,366	47,068
1990-91	6,245	56,388
1991-92	3,902	69,277
1992-93	97	79,997
1993-94	1,141	85,228
1994-95	5,032	98,766
1995-96	9,435	70,484
1996-97	3,862	60,007

Source : Compiled from various Annual Reports of
relevant years of IFFCO.

The analysis worked out in table 7.3 indicates that the comparative study of account receivables and working capital of IFFCO. Accounts receivable funds were Rs. 874 lakhs in the year 1986-87 which arose to Rs. 3862 lakhs in the year 1996-97. The highest amount of account receivables was Rs. 9435 lakhs in the year 1995-96 and the lowest amount was only Rs. 97 lakhs in the year 1992-93, which had increased in the year 1987-89, 1989-90 and 1990-91 in Rs. 4485 lakhs, Rs. 4306 lakhs and Rs. 6245 lakhs. But it had decreased during the year 1991-92 and 1993-94 respectively. The amount of accounts receivables Rs. 3902 lakhs and Rs. 1141 lakhs. But the comparison the same 1995-96 to 1986-87 we found that account receivable increased 'tremendously'.

After the analysis of the table 7.3 it is quite clear that the working capital has been increased from Rs. 37,287 lakhs 1986-87 to Rs. 60,007 lakhs in the year 1996-97. The highest working capital Rs. 98,766 in the year 1994-95, and lowest in 1986-87 which is Rs. 37,287 lakhs. After the period of 1994-95 till 1996-97 the working capital is decreasing continuously.

It has also been illustrated chart No. 7.3 to clarified the position well.

COLLATERAL STUDIES

CONCLUSION AND RECOMMENDATIONS

Soon after attaining the freedom, the Government of India, through its Five Year Plans, launched a programme for transforming agriculture from way of life to a commercial proposition and making the country self-sufficient in food and fibre. Fertilizer is the kingpin of Indian agriculture. It, therefore, essentially popularised the use of chemical fertiliser amongst the farming community. For this, the use of cooperative network was considered most appropriate, since it touched million of farmers all over the country by instilling in them sense of self-reliance, self-support and confidence.

Fertiliser is considered as one of the essential inputs which enhances agricultural productivity. But India has to import a large quantum of fertiliser every year to bridge the gap between the consumption and domestic production of fertiliser. Fertiliser industry has much scope for its expansion. IFFCO is the single largest producer of fertiliser in the country. Past performance shows that it manages its affairs very efficiently.

The new wave of liberalisation through which Indian economy is passing nowadays and with the poor performance, the much talked public sector would have limited role to play in fertilizer industry in the future. The co-operative sector in the form of IFFCO has proved its worthiness in this capital intensive industry and has larger scope. IFFCO is not only producing the fertilizer but also engaged actively in transforming the whole agricultural and rural scenario of the country by implementing various schemes for the agricultural and rural development.

It has been now an established fact that fertilizer is the most important factor for increasing the agricultural productivity. It has been estimated that for feeding up the rapidly growing population and the limited availability of arable land, country has to depend more and more on the methods of intensive farming. Thus, fertilizer has to play a vital role in the years to come. The consumption and production trends of fertilizer as an essential agricultural input, show that the demand and the production of fertilizer are

continuously increasing since the independence or more specifically since the advent of 'Green Revolution'. But there is a wide gap between the domestic production and the demand for fertilizer in the country. Thus, country has to import large quantity of fertilizer every year by consuming precious foreign exchange.

Co-operative sector owns only five plants in all (four of IFFCO and one of KRIBHCO), but as far as the utilisation of installed capacity of production is concerned, co-operative sector has starting performance by utilising more than hundred per cent capacity in most of the years. But contrary to this fact, the share of co-operative sector in the total fertilizer production is declining year by year. This indicates that the expansion of fertilizer industry is not in the better performing co-operative sector but in the public and private sectors which are mismanaged. Initially co-operatives were assigned the distribution of agricultural input including fertilizer in the agricultural sector.

The saying "Like faith, cooperatives move mountains" has come true in case of Indian Farmers Fertilizer Cooperative Ltd. (IFFCO). It started as an experiment in a sophisticated and highly capital intensive industry and has blossomed to occupy a place in the history of national as well as international cooperative movement. Prior to 1967, the cooperatives were virtually the monopoly agency in the distribution of fertilizer accounting for more than 70 per cent of the total fertilizer distributed in the country. They had a fully developed infrastructure like the rural godowns outlets covering even the remote and hilly area, credit support and structure comprising the village level societies to the state and national level societies to undertake this job. However, there were no production facilities in the cooperative sector for this crucial agricultural impact. To fill this gap, the cooperatives were organised in the country. Indian Farmers Fertilizers Cooperative Limited, popularly known as IFFCO, was established under the sponsorship of National Cooperative Development Cooperation. IFFCO was registered as a Multi State Cooperative Society in November, 1967, since then it has been marching ahead with success.

Indian Farmers Fertilizers Cooperative is multi-unit largest fertilizer manufacturing co-operative in Asia. The cabinet approved the proposal for issue of a letter of intent in September, 1967. The American co-operatives, on the other hand, formed a non-profit organisation namely Co-operative Fertilizer International (CFI) and agreed to provide one million dollar besides technical know-how to the project.

The objectives of IFFCO shall be to promote the economic interest of number of undertaking manufacturing of chemical fertilizer and allied products/bye products, to set up plant or plants for manufacture of chemical fertilizers and maintain and allied products/bye products; to provide and maintain and administer factories, township, railway siding, collaboration with foreign countries for machinery and equipments to establish branch office and sales depts, to carry an agency business of every kind and description connected with the business of IFFCO, and to enter into contract for purchase of raw material and finished products.

IFFCO has certain set of objectives for itself. Its primary objective are :-

1. Production of quality chemical fertilizer.
2. Making the fertilizer available nearest to the consuming points.
3. Strengthening cooperative system to withstand competition.
4. Education of farmers and cooperative members by popularising balanced fertilisation programme and improved agronomic practices.

IFFCO started with an authorised capital of Rs. 200.00 crores. Its share capital amounted to Rs. 86.40 crores on 31st March, 1992. The share capital of the society stood at Rs. 362.09 crore on March 31, 1997 as against Rs. 357.30 crore on 31st March, 1996. It celebrated its Silver Jubilee in 1991.

The society is implementing the expansion of the production capacities of the operating units at Phulpur, Kalol and Kandla. In addition IFFCO has taken up the task of

setting up a grassroot Ammonia Urea plant at Nellore in Andhra Pradesh involving sizeable investment. The internally generated funds need to be conserved to enable the society to raise funds required for financing these projects. Board of Directors is pleased to recommend payment of enhanced dividend at 13% compared to 11% paid last year to member societies whose names stood in the membership register of the society as on March 31, 1997.

Membership of IFFCO, which was only 57 in 1968, has increased to 29,359 as on 31st March, 1992. The total number of member shareholders of the society as on March 31, 1997 was 33,260 as against 30,426 as on March 31, 1996. IFFCO came into existence in November, 1967. The Govt of India liberalised policy and domestic and foreign investment in fertilizer industry was being encouraged. Indian co-operatives produced about twenty five to thirty percent of total fertilizer production in the country. Its contribution had to be framed keeping in view the special requirement involving primary and secondary societies for raising the equity.

IFFCO's investment in KRIBHCO stood at Rs. 97.00 crore on March 31, 1997 which accounted for 21.07% of the paid up capital of KRIBHCO. KRIBHCO plant at Hazira has maintained a high order of performance by producing 15.04 lakh tonnes of urea with a capacity utilisation of 106% between April, 1996 and March 1997. KRIBHCO is promoting a fertilizer project in Oman with RCF and Oman Oil Company. A dividend of Rs. 10.67 crore has been received during the year.

IFFCO has invested Rs. 7.97 crore in Godavari Fertilizer and Chemical Ltd. (GFCL), Rs. 3.24 crore as equity in India Potash Ltd. (IPL) which accounts for 34% of the paid up capital of IPL, Rs. 10.00 lakh in Maharashtra State Cooperative Bank Ltd, A dividend of Rs. 1.5 lakh has been received for the year 1995-96, Rs. 1 lakh each in Indian Tourism Cooperative Limited (CoOPTOUR) and National Films and Fine Arts Cooperative Limited (NAFFAC) Indian Consortium Consisting of the Government of India, IFFCO and SPIC and entered into a long term agreement with Industries Chimiques Du Senegal (ICS) for supply of Phosphoric Acid

by setting up a plant in Senegal. IFFCO had contributed Rs. 7.80 crore as equity equivalent 106% of the paid up capital of ICS. The society's investment in ICS has resulted in assured supplies of Phosphoric Acid to a large extent.

In 1996, the company produced 3.08 lakh tonnes of P_2O_5 and 1.79 lakh tonnes of complex fertilizers. The company supplied 2.25 lakh tonnes of P_2O_5 to IFFCO during the above period in the form of Phosphoric Acid. Senegal had a separate mining company called Compagine Senegalaise Des Phosphates De Taiba (CSPT) to mine phosphate rock for export and use in Phosphoric Acid plant of I.C.S. The CSPT has now been merged into ICS. IFFCO is examining a proposal to invest US \$50 million in the form of equity and loan for the ICS Expansion Project.

The involvement of capital in the production of fertilizers by IFFCO is enormous and requires efficient management of the capital available from all the sources.

The evaluation of management performance is done, finally by the society at large. It is because the laboratory of a social scientist and the test of the validity of his theory is society itself. Hence, the prudent decisions made today will fetch benefit tomorrow or the foundations of bright future are to be laid down at present. Because, the future is not going to be made tomorrow, it is being made today and largely by the decisions and actions taken with respect to the tasks of today.

There are two concepts of working capital viz 'Gross' and 'Net'. Gross working capital is the total of all the current assets while net working capital is the excess of current assets over current liabilities.

Considering time as the basis of classification there are two types of working capital viz. 'Permanent' and 'Temporary'. Permanent working capital represents the assets required on a continuing basis over the entire year. This type of working capital represents, additional assets required at different time during the operation year. Such working capital varies with seasonal and cyclical variation in the business.

Working capital requirements are financed in way viz. through internal sources and external sources.

Internal sources include use of depreciation fund, retained earning, long term loans and share capital. Internal sources are used to finance permanent working capital requirement.

Temporary working capital requirements are financed through external sources which include trade creditors, customers advance and cash discounts, short term deposit, cash credit arrangements with banks, short term loans from Government and right debenture.

Sources of funds of IFFCO Phulpur Unit use of shareholder funds (Share Capital, Share Application Money and Admn. Fee, Reserve Funds and other funds), loan funds (secured loans, unsecured loans).

Application of funds use of IFFCO Phulpur Unit which include inventories, sundry debtors, cash and bank balances, loans and advances.

Working capital management involves deciding upon the amount and composition of current assets and how to finance these assets. These decisions involve trade off between risk and profitability.

The profitability of a business largely depends upon. "How the working capital is managed." Proper management of working capital may result in greater profitability.

It has been further observed that the financial manager is always faced with the trade of between liquidity and profitability or risk and return. His success thus, depends on how well he manages the volume of investment in different current assets and borrowing from different current liabilities between these two extremes. However, the volume of current assets has not been the symbol of their liquidity, which rests completely on the quality of such assets. Thus, the firm legally solvent might become technically insolvent by the liquidity of its current assets is not at desired level. Consequently, neither less nor more working capital is preferable for the smooth operation of the business concern.

Spontaneous financing and financing by retained and earnings are the most convenient sources of working capital. Hedging and conservative are the two opposite extreme approaches for the financing of working capital. A successful finance manager always tries to follow the mid-way between these two liberal and conservative approaches.

Problems of working capital are complex, the reason being that the working capital is required by all industries irrespective of whether they are engaged in manufacturing or service industries. It is possible that the problems may be pronounced in the case of manufacturing industries than in others, but the impact of the basic problems continues to remain there in varying degrees. In many situations, organisations find it relatively easy to raise fixed capital requirements as compared to working capital requirements. This is so because the frequency of having to face problems of working capital requirements as compared to working capital requirements is more than what it may be in fixed capital requirements, where decisions have to be taken sparingly with a reasonable time margin.

A complex area of business finance is working capital management. Management of working capital has two dimensions - short term uses of funds and short term sources of funds. Working capital management itself is a first stage sub-problem in the total financial dilemma and short term financing is a second stage sub-problem within the working capital management.

As it has been mentioned 'working capital' has been used to denote the surplus of current assets over current liabilities. Thus, the term 'working capital financing' may be used to denote the arrangement of funds equal to the amount of working capital. However, in practice, this aspect is used to manage the funds necessary to finance all the current assets. The main sources of working capital are spontaneous financing (or trade credit), short term financing and long term financing.

Collection of share capital, debentures preference shares, long term debts and retained earnings are the sources of long term financing. If all the current assets are financed by long term sources, the entire working capital of the firm would be represented by net quick

assets, and these would be no difference between gross and net amount of working capital. "Short term financing is identified with decision making rather than with any specific calendar time. Financing decision that affect current operations without changing gross or net capital are short term. The category of funds covers the need of working capital for financing day today business requirements does not exceed beyond a year. The sources of short term working capital may be internal as depreciation funds, provision for taxation, accrued expenses and external sources as trade credit, bank credit, credit paper, public deposit, customer's credit, government assistance, loans from directors etc, security of employees, factoring, new money market instruments. The Indian money market are as call and notice money, inter bank term money, treasury bills, commercial bills, certificate of deposits, commercial paper etc, development of mutual funds and other institutions, factoring, issue of credit cards. The Indian banking system cannot remain isolated from the development and trends in the financial system in the international area. In India also the process of de-regulation and liberalisation has come to be initiated,

but of course, with certain degree of caution, in the face of implementation.

The factors, which help to produce a large volume of output, are known as real capital. The real capital includes two major categories :

- (1) Fixed capital consists of factories were houses, offices, shops, buildings etc, used in industry, trade, plant and machinery, equipment, earns of transport and cost & communication.
- (2) Working capital or circulatory capital includes raw materials, fuel, goods in process of manufacturer, stock held by producers or traders etc.

The amount, which a community adds to its capital during a period, is known as the amount of its investment or capital formation during that period. Here the researcher has tried to give a clear picturer of IFFCO's capital and finance growth during the past years. The society is continuously increasing area of production as well as area of distribution. These efforts are not sufficient and need more investment of capital.

IFFCO contributed Rs. 97 crore as equity in KRIBHCO, a sister Cooperative Fertiliser venture, which produce 15 lakh tonnes of urea every year. It has also contributed Rs. 8 crore as equity as Godavari Fertiliser and Chemicals Limited (Joint sector enterprises of A.P. Govt) ADAP manufacturing unit located in Andhra Pradesh.

IFFCO, alongwith the Govt of India and SPIC entered into long term agreement with Industrial Chemique Du Senegal ICS for supply of Phosphoric Acid and set up plant of Senegal. IFFCO has contributed Rs. 6 crore to help improve the performance to the same.

It is a matter of pride and satisfaction that in a capital intensive industry, like fertilisers, the society has been successful in working consistently with profit since it's going into production. As a result of successful performance and continuous, stable and increasing profitability during the proceeding years, the society has been able to further consolidate its financial position and enabled it to venture upon its expansion and diversification of plants with more confidence and self reliance.

Phulpur current ratio is not very sound because ratio is more than two and the liquidity of the Phulpur Unit is not desirable. It observed that unit has not properly utilised the cash. IFFCO's contribution in the development of agriculture through transfer of improved farm technology and integrated rural development programme has also received wide acclaim.

The size of working finance has been growing annually, though its major portion has been either diverted to fixed investment or to bring down the accumulated losses every year. The major portion of working finance was mostly derived from unpaid interest on long term loans, which was practically a fictitious source. The common practice that the permanent assets are to be financed by long term and short term source has been seen followed by IFFCO during the study period. However, some of the estates under it have yet been in gestation period,¹ thereby requiring an injection of permanent fund every year.

The 'hard core' or the requirement of permanent working capital has neither been evaluated nor decided by the management of IFFCO.

The commercial banks, as the readymade sources of working capital were charging high rate of interest and always remained sensitised towards secured and ending rather than the need of the borrower.

The internal sources of working finance had been sufficient relief in IFFCO. The depreciation, as a source of internal finance, had not been charged even to all the fixed assets of IFFCO. The leverage position (or the debt equity relationship) of the IFFCO has been found on the right direction, through it has been improved during the research period from time to time.

Cash is the most important current asset for the operation of the business. Cash is the basic input needed to keep the business running on a continuous basis; it is also the ultimate output expected to be realised by selling the service or product manufactured by the firm. The firm should keep sufficient cash, neither more or less. Cash shortage will disrupt the firm's manufacturing operation, while excessive cash will simply remain idle, without contributing anything towards the firm's

profitability. Thus, a major function of the financial manager is to maintain a sound cash position. The intrinsic liquidity of cash makes it distinct from other assets. This is a risk free asset. Hence, the measurement of liquidity of any assets is decided on the basis of its proximity to cash, cash is the most liquid form of current assets but it involves the most unprofitable blockage of resources at the same time. Consequently the financial manager is always faced with liquidity and profitability delemma while managing money.

Cash is the money which a firm can disburse immediately without any restriction. The term cash includes coins, currency and balances in its bank accounts. Sometimes near cash items, such as marketable securities or bank time deposits, also included in cash. The basic characteristic of near cash assets is that they can readily be converted into cash. Generally, when a firm has excess cash, it invests it in marketable securities. This kind of investment contributes some profit to the firm.

As the most liquid form as assets, money is the pivotal point around which all

the activities of a firm revolve. The operations of a firm, in the ultimate analysis are all geared towards money. As Bolten puts into, cash is indeed, the oil (as it is for machinery) to lubricate the ever turning weheels of business. A firm has to maintain the optimum level of cash determined carefully in the light of expected swings in business activities.

Cash management represents the art of keeping amount at hand to a minimum, while holding sufficient access to it to avoid financial difficulties and to permit the acquisitions of other assets whenever needed. Cash is the life blood of a business concern, and its steady and healthy circulation throughout the entire business operation has been shown repeatedly to be the basis of business solvency. The analysis of the funds flow of IFFCO was persistently using its current sources towards the accumulation of fixed assets and towards compensating the operating losses of the study period. Thus, the cash planning and control procedures of IFFCO were both undeveloped as well as in effective. As a matter of fact, the cash holding of IFFCO was neither sufficient nor proportionate to finance its operational needs. It was further

distorted by holding voluminous current assets of slow liquidity. Thus, it has been found that the cash management and control aspects of IFFCO were still uncultivated as well as neglected part of its financial management. Money is the real asset and it is to be maintained to keep the credit standing of a concern. The alert financial manager of a firm always wants to minimise unproductive cash balance to invest temporarily excess cash advantageously, and to make the best possible arrangements for meeting planned and unexpected demands on the company's cash. At this situation the financial manager of a firm finds himself in dilemma between risk and return or profitability and liquidity in his firm. If the cash balance is kept high, the profitability will suffer at the cost of liquidity, while, if the cash balance is kept low liquidity will suffer at the cost profitability. This situation is a "Trade off between risk and return." The financial manager is always faced with this problem while operating a going concern and his duty is to maintain balance between there two extremes (risk and return). The cash flow is a tool for the measurement of corporate health through the appraisal of stock values and this tool is used these days by management people, security

analysts, accountants and investors to investigate the various dimensions of a business concern. On the question of the appropriate level of cash balance, a firm arrives at reasonable solution, by combining formal cash management models and the techniques of cash budgeting with its experience and experiments. The extent to which analysis should be carried would be governed by the cost of the analysis.

Inventories constitute the most significant part of current assets of a large majority of Companies in India. On an average, inventories are approximately 60 per cent of current assets in public limited Companies in India. Because of the large size of inventories efficiently and effectively in order to avoid unnecessary investment in them. An undertaking neglecting the management of inventories will be Jeopardising its long run profitability and may fail ultimately.

Broadly speaking, inventories include machines, machine parts, tools and even personnel, tracks, cash and auxiliary equipment of all kinds required to run a business. In non-manufacturing organisation, evaluation of other

things might also be considered as inventories - a library's inventory of books, a bank's inventory is specialists skill. The modern firm may not be expected to meet the demand of its product with immediate production. Thus inventories serve to uncouple successive operations in the process of making a product and getting it to customers.

Inventories are necessary because it takes time to complete an operation and to move product from one stage to another. On the other hand, some inventories are also employed for organisational reasons as, to let one unit schedule its operations more or less independently to another.

Inventory needs special treatment in the sphere of working capital management due to undermentioned reasons.

- (i) Inventory has a significant volume in most firms.
- (ii) Inventory is the least liquid among other current assets, and
- (iii) Changes in the level of inventory have important economic effect on the firm.

"When you need money, look to your inventories before you look to your bankers. Thus goes the popular adage about inventories due to the prevailing bankers' policy that they lend lot of their money on the security of 'inventory'. Inventory accounts for a large part of many business concern total assets and its effective management is required both for the proper functioning of the normal production - distribution operations of the business, and for keeping inventory holding costs to a minimum.

The objectives of holding inventory by a firm may be to bridge the time gap between production and sales to meet competition, to reduce the discontinuities in production process and to hedge against price increase and material shortages. "Inventories also serve as cushions in each stage of planning, to absorb the shocks of demand forecast errors to permit more effective use of facilities and staff in the face of demand fluctuations, and to isolate one part of the system from the next to permit each to work more effectively. The objectives of inventory management are directed to minimise

the firm's investment in inventory and to meet the demand for the product by efficiently organising the firm's production and sales operations. To optimise the value of the firm, the business concern always finds itself in trade off minimising the cost and maximising the benefit of holding certain level of inventory.

An effective inventory management should:

- (1) ensure a continuous supply of materials to facilitate uninterrupted production,
- (2) maintain sufficient stocks of raw materials in periods of short supply and anticipate price changes,
- (3) maintain sufficient finished goods inventory for smooth sales operation and efficient customer service,
- (4) minimise the carrying costs and time, and
- (5) central investment in inventories and keep it at an optimum levels.

Inventory constitutes the most important and largest elements of working

capital in IFFCO. A study of the overall adequacy of inventory in IFFCO discloses that the growth of working capital and inventory the IFFCO in study period. The situation of 'store and spares' inventory as compared to its annual consumption was even worst in IFFCO the study period. Mostly, these inventories exceeded one year consumption. The proportion of the two components of inventory has not reflected a clear trend of their relationships, though the volume of both were increasing considerably during the study period. Among the internal causes of inventory accumulation in IFFCO such as lack of inventory planning and programming, declining sales during the succeeding years, disintegrated approach to inventory management and absence of inventory control techniques are noteworthy.

What is the message for public sector inventory management in India following the imposition of economic sanctions by the USA and some other development countries in the wake of nuclear tests conducted at Pokhran in Rajasthan on May 11 and 13, 1998? While, in the ultimate analysis, freezing of economic aid may be a blessing in disguise for India, the immediate impact may be a (marginal) reduction in the availability of capital. This may mean an upward pressure on commercial lending rates (in contrast to the signals for a cheaper money policy through three-stage reduction in Bank Rate from 11% to 10.5% on March 18; to 10% on April 02; and to 9% on April 29, 1998). The inflation rate standing at 6.5% on May 02, 1998 (Crossing the threshold of six percent for the first time 50 weeks) may also call for curbing money supply through isolation in interest rates. With an increase in the (administered) prices of petro-goods and other (import-linked) items, the overall inflationary spiral may rise further.

It is learnt that India will build strategic stocks of imported crude oil to insulate it from future exigencies of war and price volatility.

of petroleum products. According to a document referred to by Reuters, India aims at strategic crude stock of 12.55 million tonnes, enough for keeping its refineries in operation for 45 days. The documents prepared by the Oil Corporation Committee has, reportedly, called for an initial strategic cover of 4.25 million tones of imported crude oil as contingent supply for 15 days. The total cost of the project, including crude imports, has been pegged at Rs. 8718 crore. Even if these costs are recovered through a levy on petroleum products, a higher initial demand for working capital with grater investment in inventories, along with the higher inflation-potential of such a policy, cannot be denied. Since many of the big PSUs are in the oil sector, what happens here affects the Indian economy as a whole in a big way.

An obvious solution is to cut down "administrative lead time" and all conceivable bottlenecks on the supply route. But the practical possibility of a "Zero-inventory level" or "just-in-time (JIT)" is much too remote even in those lines which have little linkage with

imports. As a safeguard against panicky situations, even the public distribution system may be called upon to maintain stocks of food and other essential commodities at fairly high levels. The private sector, too, may feel like having strategic augmentation in the levels of creation in inventories, notwithstanding an increase in interest rates and other costs of inventory maintenance.

Trade credit is the most important feature of the modern business. It is considered as an essential marketing tool, acting as a bridge for the movement of goods through production and distribution stages to customers finally. A firm grants trade credit to protect its sales from the competitors and to attract the potential customers to buy its products at favourable terms. When the firm sells its products or services and does not receive cash for it immediately, the firm is said to have granted trade credit to customers. Trade credit, thus,

creates receivables or book debts which the firm is expected to collect in the near future. The book debts or receivables arising out of credit has three characteristics. First, it involves an element of risk which should be carefully analysed. Cash sale are totally riskless but not the credit sales as the cash payment has yet to be received. Second, it is based on economic value. To the buyer, the economic value in goods or services passes immediately at the time of sale, while the seller expects an equipment value to be received later on. Third, it implies futurity. The cash payment for goods or services received by the buyer will be made by him in a future period. The customers from whom receivables or book debts have to be collected in future are called trade debtors or simply as debtors and represent the firm's claim on assets.

Receivables constitute a substantial portion of current assets of several firms. For example, in India, trade debtors, after inventories, are the major components of current assets. They form about one third of current assets in India. Granting credit and creating debtors amount to the blocking of the firm's

funds. The interval between the date of sale and the date of payment has to be financed out of working capital. This necessitates the firm to get funds from banks or other sources. Thus, trade debtors represent investment. As substantial amounts are tied up in trade debtors, it needs careful analysis and proper management. Receivables are a step nearer to cash than those of inventories and are arrived at only after the finished stock, is sold to the customers. Investment in receivables is function of credit sales collection policies and cash discounts. Thus receivables form a major component of current assets and thereby of working capital as well.

The pertinent question at this stage may be why receivables are created. The overall objective of a business concern rests on its profitabilities which is achieved with the expansion of its sales to a fairly large size. A substantial part of sales is stimulated by credit sales which has a great enthusiasm of earning profits.

The term 'receivable' has been defined "as debt owed to the firm by customers arising

from the sale of goods or service in the ordinary course of business." "Policies concerning the management of accounts receivable again involve us in the dilemma of liquidity versus profitability. To the extent that we extend lenient credit terms we tie up funds in receivables and Jeopardise our own ability to pay bills. But we also make easier to sell our product and (hopefully) improve our profits." Hence, the management of Accounts Receivable (AR) is primarily concerned with the trade off between the profits from increased sales generated by credit policies and the costs implementing such policies.

In an organisation, both sales and credit departments deserve responsibility for the creation of and collection from receivables. The sales department can help through cautions and intelligent selection of risk and appropriate collection policy as well. Receivable of a firm must flow into cash at a predetermined rate if the firm is to have cash to pay debts and to maintain its profitability. The promptness in payment is important because credit requires financing which is costly, while lengthening

delays in payment are a sign of doubtful or debts.

The level of accounts receivable is a function of the volume of sales, the credit terms, the riskiness of the individual credit customer and seasonal influences. Further depending on the estimated increase in net revenue, a company is willing to add progressively riskier accounts until the expected losses from those that prove to be uncollectible become excessive. In short run when credit sales increase, the investment also decreases.

The investment in receivables may be guided by volume of credit sales and the length of time between sales and collection. In turn, level of credit sales is the function of (i) size of the firm (ii) product cost, durability of the product etc (iii) firm's financial resources and (iv) role of the competitors. On the other hand, length of time between sales and collection is decided by (i) firm's credit standards, (ii) credit period (iii) discounts given, and (iv) collection efficiency of the firm.

The structure of receivables includes (i) sundry debtors, which are the functions of credit sales, and (ii) loans and advances, which includes, advances to contractors, advances to suppliers, deposits with authorities, prepaid expenses etc.

The outbreak of the factoring service took place about 150 years ago when the European textile was sold in American markets by some professional traders. They themselves assumed the dealership of the customers purchasing those textiles on credit. Thus they performed their job in two ways, selling textile and guaranteeing the payment of debt extended to the purchases. Now, there are many factoring companies in addition to some commercial banks, doing this job in Europe and America. In turn, the underdeveloped countries are still lacking the business concern having the function of a 'factor'. This has stated only recent in India.

Factoring is a unique financial innovation. It is both a financial as well as a management support to a client. It is a method of converting a non-productive, inactive assets (i.e. book

debts) into a productive assets (viz. cash) by selling book debts (receivables) to a company that specialises in their collection and administration.

The term factor has its origin in the Latin word 'facere' meaning to make or do or to get things done. Originally, factors acted as selling agents. They facilitated the flow of merchandise from the manufacturers to customers. The function of a factor include finding out customers for the manufacturer's products, stock his goods sell them and finally collect sales proceeds and remit them to the manufacturer. Thus, the function of factors of olden days included stocking, marketing and distribution as well as administration and financing of credit. The modern factor has specialised in credit collection and financial services, leaving the marketing and distribution functions to the manufacturer.

The factor may like to reduce or enhance credit limit to customers depending on his assessment of the credit risk which the client may not agree with. Factoring benefits the

clients, but the overall benefits in the long run occur from the good management of producing and marketing operation. Factoring, by ensuring the credit collection, helps the firm to concentrate on production and marketing.

Phulpur current ratio is not very sound because ratio is more than two and the liquidity of the Phulpur is not desirable. It observed that unit has not properly utilised the cash. IFFCO's contribution in the development of agriculture through transfer of improved farm technology and integrated rural development programme has also received wide acclaim. The development of rural programme, IFFCO conduct various types of development work like farmer training programmes, seed multiplication programmes, Tribal area development and village adoption etc.

In the long run IFFCO demonstrations, farmer meeting, field days village programme, crop leaflets etc. became the model for the fertilizer industry. Indeed, the industries copied IFFCO promotion programmes because they were so successful. A lean, smart and dedicated staff that focus on the mission will more than

pay IFFCO's obligation to society by sustaining a strong and healthy agriculture. It is true that agriculture is constantly changing. IFFCO will need to keep abreast of these changes and adopt new programme to meet the desired changes. The basic need for educating for system on new and improved practices never changes.

Over capitalisation : The causes leading to over-capitalisation can be traced to inadequate planning delays and avoidable expenditure during the construction, surplus machine capacity tied aid resulting in the compulsion to purchase of imported equipment on a non-competitive basis, expensive turn-key contracts, bad location of projects and the provision of housing and other amenities on liberal scale.¹

Faulty Pricing Policy : The co-operative society has to keep in mind the social implications of its price policy. In this connection, it is important to remember that the prices are kept low even when costs have been rising. It is also important to note that government manipulates under public pressure

1. Report of the Study Team on Public Sector Undertakings 1967. (Page No. 200)

the pricing policy for political consideration. Prices are being fixed by FICC/Govt of India, which in turn results no fault pricing.

Inefficient Planning and Budgeting : The system of classification of expenditures adopted in the budgets does not link expenditure to activities and end results. The detailed budgets are not prepared. These budgets do not serve other managerial requirements. Before preparing budget, we should also forecast the actual requirements.

Poor Profitability : IFFCO gain poor profit because his expenditures are more. IFFCO has taken loan from IBRD and his Exchange Fluctuation is going high and high so profit becomes lower. In some cases it has emerged losses also.

Heavy Burden of Social Overheads : Heavy expenditure is often incurred on social overheads, such as building of township, schools, hospitals and theatres. While these are necessary, the question is whether the expenditure on such items could have been avoided or reduced. IFFCO expands on village adoption, village development and farmer training.

Inadequate attention on Cost Accountancy: Unfortunately Cost Accountancy to which all its important, has not got the necessary attention. The descriptions clearly recognises that cost accounting should occupy an important place in the organisation.

IFFCO's plants are quite modern as well as automatic, therefore, production problems are not very serious. However, there has been found some extra precautions which has resulted in excessive inventory building. It unnecessarily blocks the capital. Coal, for instance, is dumped here so much that it may be sufficient for two years. There is no need to maintain so huge stock of coal in the unit.

As compared to Aonla Plant, which is gas based, Phulpur Plant has less edgeso far as the cost of production is concerned. It is mainly due to the fact that this plant is coal based. Whenever the price of coal is revised upward, it affects the cost of its production.

SUGGESTIONS AND RECOMMENDATIONS :

On the basis of the study of the Phulpur Unit of IFFCO, we have found out several important achievements made by it. However, it is not free from problems and limitations which have been described earlier. However, these problems are not insurmountable and can be tackled provided some concerted efforts are made in this direction. Keeping this in mind, we offer certain suggestions and recommendation to bring about necessary improvements in the various areas, specially in those areas where problem are more serious.

The excess capital should be invested in the financial institution so that organisation can gain income from other sources. The imported equipment should purchase on competitive basis.

There is a need to implement Zero base budgeting technique in lieu of conventional budgeting practices. Before deciding the budget they should forecast the future requirement.

Price is fixed by FICC (Fertilizer Industry Coordination Committee). It has always been found that the prices are fixed less as

compared to cost of production. The raw material cost increased so cost of production increased. So, it is suggested that FICC should consider the cost of production.

Interference by Government in the pricing policy of fertiliser industry should be discussed. Government should make an attempt to regulate them, when such regulations become essential. in the national interest.

It has been found that social overheads are increasing year by year. Social overheads should be linked with productivity. They should fix the percent of social overheads. Social overheads should be curtailed.

IFFCO should pay first of all the loan so that they gain more profit. Because Exchange Fluctuation Rate is going high and the loan burdens are increasing.

From time to time the machinery should be checked and maintenance of equipment should be given due importance, so that production continued without any problem. The generator set in this way that whenever power failure

the generator starts automatically without any delay. So it is necessary the generator should be maintained properly.

The raw material should not be dumped. If we dump more material, then our capital is blocked. Unnecessary blocking of the capital in the material should be avoided as far as possible.

It is also suggested that steps should be taken to dispose the surplus stores held by the organisation. Purchase plans should carefully drafted and due care must be taken in obtaining requisitions from various section.

The fertiliser should be supplied, as far as possible, equally to every state, and product should reach timely to the societies, so that they can sell the product more and more, helping the farmers in time.

Financial position of societies is not sound so they also offer to private party to sell the products. In this way, the payment may be obtained timely. It is also suggested that goods are sent against the payment or bank guarantee.

To avoid the transportation and warehouses expenses, the goods should be directly sent to the societies or whole-salers. In this way expenses can be curtailed to a large extent.

The price should be fixed less in comparison of other fertiliser industry. In this way, their product/^{would} survive in competitive market. The quality control should be imposed from time to time.

They should provide the farmer's training from time to time. In this programme, farmers should know proper utilisation of fertiliser and advantage of the use of fertiliser.

The first and foremost recommendation for the inventory management system in IFFCO is to apply the 'Integrated Approach'. The inventories either held by the estates or by the head office are to be completely recorded and controlled by the Central Stores Department or Materials Management Department under the direct supervision of the chief executive.-

IFFCO is expected to improve its prevalent system of inventory management regarding the

planning and purchasing of spare parts, manures, insecticides, fuels, herbicides, packing materials etc. and review the items to ensure that the concern is not burdened with excessive stock.

The different items should be treated separately on individual basis with proper classification and codification. For this purpose, cost reduction might be possible by reducing the variety. Application of ABC system is strongly suggested for the classification of spare parts held.

There should be close liason between the production units of different estates and the central materials management department. These two departments are supposed to establish consumption norms for different materials and suitable norms for handling losses.

The concern is suggested to be much aware of the fact that its inventories are increasing over and above its sales. This situation is to be avoided by reducing further investment in it and assure that more sales are raised by lesser amount of inventory.

IFFCO is required to collect its overdue debts as a matter of most urgent nature. The slackness in the concern's collection procedure has been equally responsible for the increasing accumulation of funds in different receivables.

The business concern is further suggested to write off the overdue debts if found irrecoverable. The receivables but outstanding debts should be taken proper care of.

The empirical evidences have made it clear that the receivables are moving faster than the movement of sales. Thus, the care is to be taken by the credit department that receivables should increase slowly than the increase in sales volume, otherwise the profitability goal of the IFFCO can never be fulfilled.

The credit policy, which is not clear in itself, has not been followed by the concern while collecting the overdue accounts. Thus, the debtors as well as the staff members (if necessary) are to be given certain incentives for the faster collection of debts. The cash discount for early payment and interest charges on overdue accounts are the universally accepted

and successful policies for the speedy collection of receivables.

Slow disbursement of expenditures, wheresoever possible, has also been recommended in order to bring the investment in current assets to the minimum.

IFFCO has gone a long way in overcoming the major problems of supply of adequate quantity of foods to our countrymen. This co-operative society has to shoulder the further responsibility of keeping the supply line of fertiliser duly maintained in accordance with the needs of the farmers. Fertiliser being basic inputs for agriculture, it should be made available to the farmers timely adequately and at reasonable price. IFFCO being an unique experiment of producing fertiliser in the co-operative sector, is certainly fulfilling the goal set before it. However with the liberalisation and mobilisation of the economy, IFFCO will have to face the challenge of imported fertiliser of better quality and at a cheaper rate. It has to gear itself to this challenge and produce quality fertiliser at lower cost. So far it has been the pride of the country and it must strive harder to maintain this position.

PARTICULARS		TOTAL		2000-01		2001-02		2002-03		2003-04		2004-05		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18		2018-19		2019-20		2020-21		2021-22		2022-23		2023-24		2024-25		2025-26		2026-27		2027-28		2028-29		2029-30		2030-31		2031-32		2032-33		2033-34		2034-35		2035-36		2036-37		2037-38		2038-39		2039-40		2040-41		2041-42		2042-43		2043-44		2044-45		2045-46		2046-47		2047-48		2048-49		2049-50		2050-51		2051-52		2052-53		2053-54		2054-55		2055-56		2056-57		2057-58		2058-59		2059-60		2060-61		2061-62		2062-63		2063-64		2064-65		2065-66		2066-67		2067-68		2068-69		2069-70		2070-71		2071-72		2072-73		2073-74		2074-75		2075-76		2076-77		2077-78		2078-79		2079-80		2080-81		2081-82		2082-83		2083-84		2084-85		2085-86		2086-87		2087-88		2088-89		2089-90		2090-91		2091-92		2092-93		2093-94		2094-95		2095-96		2096-97		2097-98		2098-99		2099-00		2100-01		2101-02		2102-03		2103-04		2104-05		2105-06		2106-07		2107-08		2108-09		2109-10		2110-11		2111-12		2112-13		2113-14		2114-15		2115-16		2116-17		2117-18		2118-19		2119-20		2120-21		2121-22		2122-23		2123-24		2124-25		2125-26		2126-27		2127-28		2128-29		2129-30		2130-31		2131-32		2132-33		2133-34		2134-35		2135-36		2136-37		2137-38		2138-39		2139-40		2140-41		2141-42		2142-43		2143-44		2144-45		2145-46		2146-47		2147-48		2148-49		2149-50		2150-51		2151-52		2152-53		2153-54		2154-55		2155-56		2156-57		2157-58		2158-59		2159-60		2160-61		2161-62		2162-63		2163-64		2164-65		2165-66		2166-67		2167-68		2168-69		2169-70		2170-71		2171-72		2172-73		2173-74		2174-75		2175-76		2176-77		2177-78		2178-79		2179-80		2180-81		2181-82		2182-83		2183-84		2184-85		2185-86		2186-87		2187-88		2188-89		2189-90		2190-91		2191-92		2192-93		2193-94		2194-95		2195-96		2196-97		2197-98		2198-99		2199-00		2200-01		2201-02		2202-03		2203-04		2204-05		2205-06		2206-07		2207-08		2208-09		2209-10		2210-11		2211-12		2212-13		2213-14		2214-15		2215-16		2216-17		2217-18		2218-19		2219-20		2220-21		2221-22		2222-23		2223-24		2224-25		2225-26		2226-27		2227-28		2228-29		2229-30		2230-31		2231-32		2232-33		2233-34		2234-35		2235-36		2236-37		2237-38		2238-39		2239-40		2240-41		2241-42		2242-43		2243-44		2244-45		2245-46		2246-47		2247-48		2248-49		2249-50		2250-51		2251-52		2252-53		2253-54		2254-55		2255-56		2256-57		2257-58		2258-59		2259-60		2260-61		2261-62		2262-63		2263-64		2264-65		2265-66		2266-67		2267-68		2268-69		2269-70		2270-71		2271-72		2272-73		2273-74		2274-75		2275-76		2276-77		2277-78		2278-79		2279-80		2280-81		2281-82		2282-83		2283-84		2284-85		2285-86		2286-87		2287-88		2288-89		2289-90		2290-91		2291-92		2292-93		2293-94		2294-95		2295-96		2296-97		2297-98		2298-99		2299-00		2300-01		2301-02		2302-03		2303-04		2304-05		2305-06		2306-07		2307-08		2308-09		2309-10		2310-11		2311-12		2312-13		2313-14		2314-15		2315-16		2316-17		2317-18		2318-19		2319-20		2320-21		2321-22		2322-23		2323-24		2324-25		2325-26		2326-27		2327-28		2328-29		2329-30		2330-31		2331-32		2332-33		2333-34		2334-35		2335-36		2336-37		2337-38		2338-39		2339-40		2340-41		2341-42		2342-43		2343-44		2344-45		2345-46		2346-47		2347-48		2348-49		2349-50		2350-51		2351-52		2352-53		2353-54		2354-55		2355-56		2356-57		2357-58		2358-59		2359-60		2360-61		2361-62		2362-63		2363-64		2364-65		2365-66		2366-67		2367-68		2368-69		2369-70		2370-71		2371-72		2372-73		2373-74		2374-75		2375-76		2376-77		2377-78		2378-79		2379-80		2380-81		2381-82		2382-83		2383-84		2384-85		2385-86		2386-87		2387-88		2388-89		2389-90		2390-91		2391-92		2392-93		2393-94		2394-95		2395-96		2396-97		2397-98		2398-99		2399-00		2400-01		2401-02		2402-03		2403-04		2404-05		2405-06		2406-07		2407-08		2408-09	
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CHAPTER - VIII

CONCLUSION

AND

RECOMMENDATIONS

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